Keeping The Best!

How to Retain ALS Providers:

Workforce Utilization Strategies & Applying EMS Retention Principles

Virginia
OFFICE OF EMERGENCY MEDICAL SERVICES
Virginia Department of Health

Preface

This is the last in a series of four workbooks in the *Keeping the Best!* EMS Workforce Retention tool kit. This workbook addresses the pressing need of retaining our advanced life support (ALS) personnel.

There are nine jurisdictions in Virginia among the 100 fastest growing communities in the country. An aging population requires and consumes more emergency medical and critical care services. A rising EMS call volume is placing greater demands on our pre-hospital providers. EMS agency leaders and managers are caught in a situation where the demand for ALS providers is increasing faster than the supply.

Development of this workbook is an example of collaboration at its finest. The Office of EMS partnered with Virginia Association of Volunteer Rescue Squads (VAVRS) and the Virginia Association of Governmental Emergency Medical Services Administrators, (VAGEMSA), the Virginia Ambulance Association and the Regional EMS Councils to develop this workbook that focuses on the issues pertaining to the retention of ALS personnel in Virginia. The author of this workbook is Sara L. Gaba of Renaissance Resources, a Richmond based consulting firm.

The project development team was drawn from EMS managers and administrators from across Virginia. The team members include:

Name and Title	EMS Agency	City/County
Craig Bryant, EMS Coordinator	City of Salem Fire and EMS Department	Salem
Dreama Chandler Vice President	Wythe County Rescue Squad VAVRS	Wythe
Jennie Collins, Battalion Chief	Prince William County Department of Fire and Rescue	Prince William
J. Dan Eggleston, Chief	Albemarle County Department of Fire - Rescue	Albemarle
Joey King, Vice President of Operations	LifeCare Medical Transports	Stafford
Bobby Lukhard, EMS Director	Chesterfield Fire and EMS	Chesterfield
David Moody, Fire/ Rescue Chief	King George County Department of Emergency Services	King George

continued

Name and Title	EMS Agency	City/County
Thad Moore, Operations Manager	Marion Lifesaving Crew	Smyth
Bruce Nedelka, Division Chief	City of Virginia Beach EMS	Virginia Beach
Gerry Pfeifer, Captain, Recruitment Section	Fairfax County Fire and Rescue Department	Fairfax
Patty Russell, Human Resources Specialist	Loudoun County Fire, Rescue and Emergency Management	Loudoun
Ken Pullen, Program Representative	Virginia Office of Emergency Medical Services	Rappahannock

The project development also included the insight and experience from a focus group of ALS providers from Virginia EMS agencies. The ALS focus group members include:

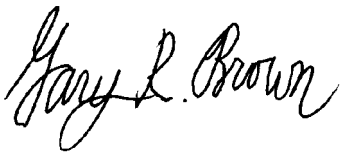
Name, Title, Virginia Certification	EMS Agency	City/County
Dreama Chandler, EMT-P Vice President	Wythe County Rescue Squad VAVRS	Wythe
Leigh Doucet, EMT-P	Spotsylvania Co. Fire and Rescue	Spotsylvania
Colin Flanigan, Lieutenant, EMT-P	Fairfax County Fire and Rescue Department	Fairfax
Harry Howe, EMT-P	Marion Life Saving Crew	Smyth
Greg Jones, Chief Flight Paramedic, EMT-P	Med Flight I, Chesterfield Fire and EMS	Chesterfield
Steve Lynd, EMT-P	King George County Department of Emergency Services	King George
Todd McFall, Lieutenant, EMT-I	Roanoke City Fire – EMS	Roanoke
Al Materia, Operations Manger, EMT-P	LifeCare Medical Transports	Stafford
Jason Stroud, EMS Manager, EMT-P	Campbell County Department of Public Safety	Campbell
Hunter Weikle, Senior Firefighter, EMT-I	City of Salem Fire and EMS Department	Salem

It is critical to preserve and invest in our EMS personnel in order to keep them in the workforce. These personnel are essential in maintaining patient safety and promoting positive patient outcomes. The capacity of our EMS agencies to provide ALS services is severely compromised when a seasoned, experienced, veteran provider leaves.

The findings and recommendations identified by using this work book will assist EMS leaders to make the right decisions, develop strategies and implement the most appropriate ALS retention programs as determined by the emergency medical care needs of your community. In addition, examining and analyzing the operation of your EMS agency will provide valuable information about what direction your organization should take to assure its future survival, advancement and growth.

We hope this document stimulates creative thought and actions for improving the retention of ALS personnel in your EMS agency.

Sincerely,



Gary R. Brown, Director
Office of Emergency Medical Services
Virginia Department of Health

A Message from VAGEMSA

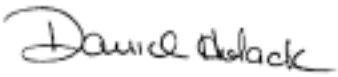
This workbook, "Keeping the Best! – How to Retain ALS Providers – Workforce Utilization Strategies and Applying EMS Retention Principles" targets growing concerns that are impacting EMS agencies across the nation. Recruiting, training and maintaining EMS personnel is a challenge for both career and volunteer agencies. This workbook will show that addressing retention issues will ease the shortage of EMS personnel.

VAGEMSA is honored to partner with the Virginia Office of EMS, VAVRS and the Regional EMS Councils in the development of this project. This document will help EMS agencies address the issues of retention, ultimately having a positive affect on service delivery.

The EMS profession is a rapidly growing industry impacting EMS agencies ability to recruit and maintain trained advanced life support (ALS) providers. Call volume, an aging population, and public expectations are placing a strain on agencies ability to meet this increasing demand for service. Growing and retaining ALS providers is critical for any EMS agency, career or volunteer. As long as the demand exceeds supply, agencies must be creative when it comes to retention.

Understanding the dynamics of the EMS resource pool currently available in Virginia is key to addressing and targeting retention efforts. This document will help you consider these trends and guide you through a best practice approach to retaining the best in your organization. "Leadership is practiced not so much in words as in attitude and in actions"- Harold Geneen. VAGEMSA is an organization dedicated to supporting Virginia's EMS leaders and with good leadership and management tools like "Keeping the Best!" Virginia EMS agencies will be successful.

Sincerely



David Hoback, President
Virginia Association of
Governmental EMS Administrators

A Word from the VAVRS

Welcome to the fourth and final workbook of the "Keeping the Best!" tool kit. These workbooks represent a joint effort by EMS organizations from across the Commonwealth of Virginia. Volunteer, municipal and commercial agencies have combined their expertise to identify solutions to retention challenges. Regardless of the size or type of your EMS agency, you can use the methods and principles introduced in these workbooks.

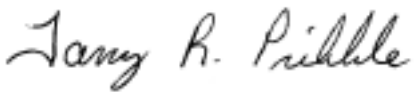
Together, we created tools that are designed for specific target markets made up of similar EMS agencies. This workbook entitled "How to Retain ALS Providers: Workforce Utilization Strategies and Applying EMS Retention Principles" uses a analytical method in finding the best strategies to help keep ALS providers in your EMS agency.

The competition for ALS technicians is of paramount importance for EMS managers, leaders and administrators as they try to provide the best possible service to their communities. While we compete for new and aspiring ALS providers, we sometimes overlook the challenge of keeping our proven veterans.

This workbook will require you to take a good, hard look at your agency. You will need to invest a significant amount of time and effort to maximize its potential. You may find solutions that do not cost a lot of money or take a considerable amount of time to implement.

It has been a privilege for the VAVRS to partner with the OEMS, VAGEMSA and the Regional EMS Councils on this project. The association supports and endorses the methods presented in these workbooks and believes this collaboration of resources has produced a superior product that can be useful for all types of EMS agencies in Virginia.

Sincerely



Tarry R. Pribble, President
Virginia Association of
Volunteer Rescue Squads, Inc

Contents

Introduction

While the pool of volunteer and career EMS personnel is aging, the pool of potential EMS personnel is decreasing. Based on 2004 research conducted through the Office of EMS Workforce Retention Project, we learned that retaining our EMS providers is getting more difficult. From 2000 to 2010, Virginia's population is projected to grow by 12%, and residents 65 years of age and older are projected to grow at 28%. During this same time frame the 16-34 year old population is expected to grow by only 8 percent. An aging population requires and consumes more emergency medical and critical care services. As the population increases, so do service demands and EMS call volumes and some Virginia counties are experiencing exponential growth. The U.S. Census Bureau reports that from July 2004 to July 2005, nine Virginia counties are reported in the top 100 fastest growing counties in the United States.

Basic Life Support (BLS) providers account for the majority of EMS personnel in the Commonwealth. Advanced Life Support (ALS) providers include several different certification levels. However, ALS providers only account for about one quarter of the EMS personnel in the Commonwealth. Because ALS providers possess advanced medical skills and are becoming a more scarce resource, the impact of losing only a few ALS providers may adversely affect the capability of an EMS agency. Further, training EMS providers to replace those that have left is both costly and time consuming.

To many of you this is not new information. ALS providers are answering more and more EMS calls. At the same time, some of your highly skilled personnel are accepting positions with other EMS agencies in both the Commonwealth and in other states because of better compensation and incentive packages. Further, some of your seasoned ALS providers are taking administrative roles as a viable career path and are no longer in positions to use their ALS skills.

Lower call volume agencies to include some volunteer agencies experience ALS provider attrition because their highly skilled providers simply do not get enough opportunities to practice their ALS skills. Other EMS agencies are faced with numerous ALS providers reaching mandatory retirement age.

New directives such as revenue recovery, which afford agencies a means to fund enhancements of their services, also requires more time of ALS personnel to complete the necessary documentation to obtain these funds.

How does an EMS leader or manager cope with all the obstacles of retaining these highly skilled EMS professionals?

Our research indicates that there are actions you can take to keep more of your ALS workforce. We will be applying a very analytical approach to uncovering the best course of action in *Keeping the Best!* of your ALS providers. We chose a disciplined methodology because it has worked in numerous industries. In the best selling book, Good to Great, Jim Collins and his research team analyzed 28 companies and identified what made some companies great performers and other simply good performers. They found that the "great" companies began the process of becoming great by confronting the brutal facts of their current reality. This process is fundamental to developing effective programs. Jim Collins writes, "When you start with an honest, diligent effort to determine the truth of your situation, the right decisions become self-evident." Some of the suggestions you find in this workbook are going to be more difficult to implement than others. Some of the ideas that emerge, as you work through this book may appear so simplistic you may think they just could not work. Determining the most effective programs for your agency is the purpose of this retention tool.

This workbook was developed with the assistance of some of the best EMS minds in the Commonwealth. The workbook project team consists of some of the most successful leaders of career, volunteer and commercial EMS agencies. The project team assisted in the design of the workbook, reviewed initial drafts and field tested the workbook to ensure the concepts presented in the following pages were useful to EMS agencies in Virginia.

The Importance of Managing a Scare Resource

As ALS providers become more difficult to recruit, retaining them becomes more important than ever before. An astute leader must understand how he currently utilizes his ALS providers and what issues are most important to them and incorporate these concepts into his retention programs. After all, whether an ALS provider chooses to affiliate with a volunteer, career or commercial EMS agency, he can exercise his right to leave an organization at any time because he is in high demand.

A number of factors contribute to the concern that there will not be enough ALS providers in the future. These five are most significant:

1. **The number of ALS providers in Virginia has not grown significantly over the last three years.**

Year	FR	EMT-B	ST	EMT-E	EMT- CT	EMT-I	EMT-P	Total* Providers	Total ALS
2003	2,022	23,498	1,282	214	2,521	467	3,085	33,089	7,569
2004	1,614	23,924	986	538	1,929	1,163	3,205	33,359	7,821
2005	1,490	23,756	464	1,286	1,220	1,814	3,376	33,406	8,160

Total represents all certified EMS personnel in the Commonwealth – one quarter of all certified EMS personnel are not affiliated with a licensed EMS agency. These provider counts are from December of each year. Designations are FR (First Responder), EMT- B (Basic), ST (Shock Trauma), EMT-E (Enhanced), EMT-CT (Cardiac Technician), EMT-I (Intermediate), EMT-P (Paramedic).

In the last three years, the total number of EMS providers in Virginia has only grown 0.9% while the ALS provider workforce has grown 7.2%. The ALS workforce population although growing still trails the 8.4% growth of the state's over 65 year old population during the same period of time. At the same time, the number of EMT-B's has remained flat. As EMT-B's represent a potential source of new ALS providers, the lack of growth in this certification level is significant. There is also a noticeable decline in the number of Shock Trauma and Cardiac Technician providers as these providers are being bridged to the relatively new EMT-Enhanced certification and the EMT-Intermediate level. By 2009, the Shock Trauma and Cardiac Technician certification levels will be completely phased out. Some of the increase in the number of certified EMT-Enhanced and EMT-Intermediates can be attributed to these bridge programs.

2. **The EMT-I may become the new backbone of ALS providers.**

   The total number of EMT-I certifications are now more than half the number of paramedics. Since this certification requires considerably fewer didactic, lab, clinical and field internship hours than the EMT-P certification and is far less costly, there may be fewer Paramedics in the future.

3. **Due to population growth, the need for ALS providers will continue to increase.**

   While the total number of EMS providers has remained flat over the last three years, the population of Virginia has grown by about 3.6% during this same time period. Further, the population of individuals 65 years of age and older has increased by 8.4% over the same time period. For this reason, it can be assumed that ALS providers are handling more EMS calls with the same amount or fewer providers. EMS agency leaders and managers are caught in a situation where the demand for ALS providers is increasing faster than the supply.

4. **10.81 % of ALS providers are not affiliated with a licensed EMS Agency.**

   As of March 2006, a significant percentage of ALS providers are not affiliated with an EMS agency. This means they are currently certified but unable to use their advanced medical skills within the EMS system in the Commonwealth. The inability to tap into these providers weakens the overall viability of the EMS system.

5. **Paramedics are the most seasoned EMS providers.**

   The National Registry of EMT's (NREMT) and the National Highway Traffic Safety Administration (NHTSA) sponsored a project in 1999 called the Longitudinal Emergency Medical Technicians Attributes and Demographic Study (LEADS). The LEADS project sent a survey to over 5,000 nationally registered EMT's and paramedics once a year for six years.

   EMS providers were asked to answer questions about who they are and what they do. The study reports that the *median* years of experience for EMT's are 2.2 years and 9.1 years for Paramedics. Paramedics have considerable tenure in EMS agencies and the loss of an EMT-P can result in the loss of considerable institutional knowledge and experience to an EMS agency.

   The implications derived from these ALS provider facts is that the demand for ALS providers will continue to increase and holding on to these highly skilled EMS professionals is critical to the effectiveness of the EMS system in the Commonwealth.

This workbook is designed to help you retain more of your ALS workforce by taking you through a several step process. Turn the page to get started!

Getting Started

Who should use this Workbook?

The workbook is designed for EMS leaders and Human Resource professionals who want to improve the retention of their ALS providers. We see three types of leaders who could benefit from this workbook. Check the box that best describes you.

- ❑ **EMS Leaders of Career and Combination (Career and Volunteer) Agencies** – These leaders are faced with an increasing shortage of new ALS recruits, an aging ALS provider workforce, and rising EMS call volumes. Some ALS providers begin in a volunteer agency and then leave this agency for a paid position in a career EMS agency.

- ❑ **EMS Recruitment Managers or Human Resource Managers in Municipalities** – These managers are similarly faced with an increasing shortage of ALS providers. Furthermore, they may be experiencing considerable competition from other localities and municipalities in recruiting ALS providers. These managers may need to design extensive salary and compensation packages to remain competitive in the work place.

- ❑ **Owners and Human Resource Managers of Commercial Ambulance Service Organizations** – The leaders of commercial EMS agencies are also an important component in the Commonwealth's EMS system. Often, these agencies provide transportation services for scheduled patient transfers and non-emergency patient care services in parts of Virginia where volunteer and career EMS agencies are not available. In addition, these agencies may augment the existing EMS agencies with back up emergency response services. The owners and human resource managers of these agencies are also faced with difficulty in recruiting and retaining quality ALS providers. In some cases, the commercial agency cannot compete with the salaries, benefit packages, career advancement opportunities, and opportunities to practice advanced medical care techniques and skills that exist in a municipal 9-1-1 service.

How to Use the Workbook

The workbook is designed to be your personal notebook, project guide, and resource tool. Use of a committed project team will greatly aid you in successfully completing this workbook. Often, refer to this workbook as you develop your ALS workforce retention programs. Write in it, underline ideas, and make notes for

yourself and your project team. Space has been provided for writing responses to questions and for completing exercises.

The material will be presented in a consistent and straight forward manner.

- **Learn** – We will introduce new information on ALS workforce issues and analytical models to approach workforce utilization.
- **Apply** – Next, we will give you ample opportunity to apply these lessons by completing worksheets, templates and deriving the implications of these practices. The worksheets developed for this workbook are contained in the appendices, however; we recommend you download these worksheets to assist you compiling the data to complete the workbook exercises. To download the How to Retain ALS Providers Worksheets go to OEM website at www.vdh.virginia.gov/oems and click on the EMS Recruitment Directory/Workforce Retention Project link, locate the worksheets and download them.
- **Critique** – The workbook will also give you feedback on your ALS workforce in the form of self-surveys, performance standards, and suggestions others have made to improve retention.

Workbook Outline

This workbook is broken down into various chapters as we take you through an analytical approach to retaining more of your ALS providers. This first chapter, Getting Started, describes who is most likely to benefit from this workbook. It also informs you of the process that will be used to present this information and provides an overall outline of the workbook.

The Workforce Utilization Model

We begin the workbook by discussing a workforce utilization model that will assist you in improving and developing your ALS workforce retention programs. This methodology consists of a four step process:

1. Define the current ALS workforce.
2. Define the desired future ALS workforce.
3. Fill the gap between the current and the desired future ALS workforce.
4. Monitor results and re-evaluate at regular intervals.

Defining Your Current ALS Workforce – Quantitative Analysis

In this section, we begin to help you define your current ALS workforce through quantitative analysis. We will look at three areas of analysis:

- Workforce demographics, turnover rates and workforce utilization practices
- EMS call volume and type (BLS or ALS skills) analysis
- EMS System Infrastructure, New Directives and Community Development factors

Based on this quantitative analysis, you will create a list of ALS retention improvement opportunities to be used later in the workbook.

Defining Your Current ALS Workforce – Qualitative Analysis

In this chapter, we begin to understand the qualitative factors that impact the retention of ALS providers by relating our research back to the four EMS retention principles we developed in our first workbook.

These principles are:

The Life Cycle Principle – EMS personnel will stay longer when leaders take specific actions at specific times in the retention life cycle.

The Success Principle – EMS personnel stay longer when they achieve success in important personal goals.

The Belonging Principle – EMS personnel stay longer when they feel welcome, needed and respected.

The Friends and Family Principle – EMS personnel stay longer when they develop strong personal relationships within their agency.

To uncover the qualitative factors that influence ALS provider retention, we used national and regional research as well as lessons from an ALS focus group. The ALS Focus Group consists of 10 diverse, yet highly regarded ALS providers from volunteer, career or commercial EMS agencies in Virginia. This group provided a wealth of insight into the ALS work experience. This chapter lays the ground work for assessing the quality of your ALS providers' work life. From this qualitative research you will identify specific retention improvement opportunities that you will list at the end of this section.

Defining the Desired ALS Workforce Future

The next chapter of the workbook is designed to help you create a vision for how you would like your ALS workforce to look in 2- 5 years. To assist you in the process we will take you through a four-step process:

1. Working from your agency vision and mission statements, develop vision and mission statements for your ALS workforce of the future.
2. Consider ongoing directives and programs that may positively or negatively impact your future ALS workforce.
3. Establish quantitative and qualitative factors of your ideal workforce.
4. Develop strategic retention goals.

At the end of this chapter you will have clearly established the desired future for the ALS workforce in your EMS agency.

Fill the Gap

Next, we will walk you through the process of filling the gap between where you are and where you want your ALS workforce. You will revisit the list of actions for improvement you established in the Defining the current ALS workforce chapters and see how these opportunities can be turned into initiatives to achieve your future ALS workforce strategic objectives. We will assist you in grouping and prioritizing your key initiatives and linking them to basic EMS retention principles. We developed a decision tree analysis tool for more detailed feasibility and priority decisions. At the end of this chapter we will assist you in creating a strategic plan for ALS retention. We will also touch on the importance of using good project management and change management skills as you implement your ALS Retention program.

Monitor and Re-Evaluate

The last chapter will teach the importance of checking your tracking mechanisms to measure success and monitor the ALS Retention Plan on an ongoing basis.

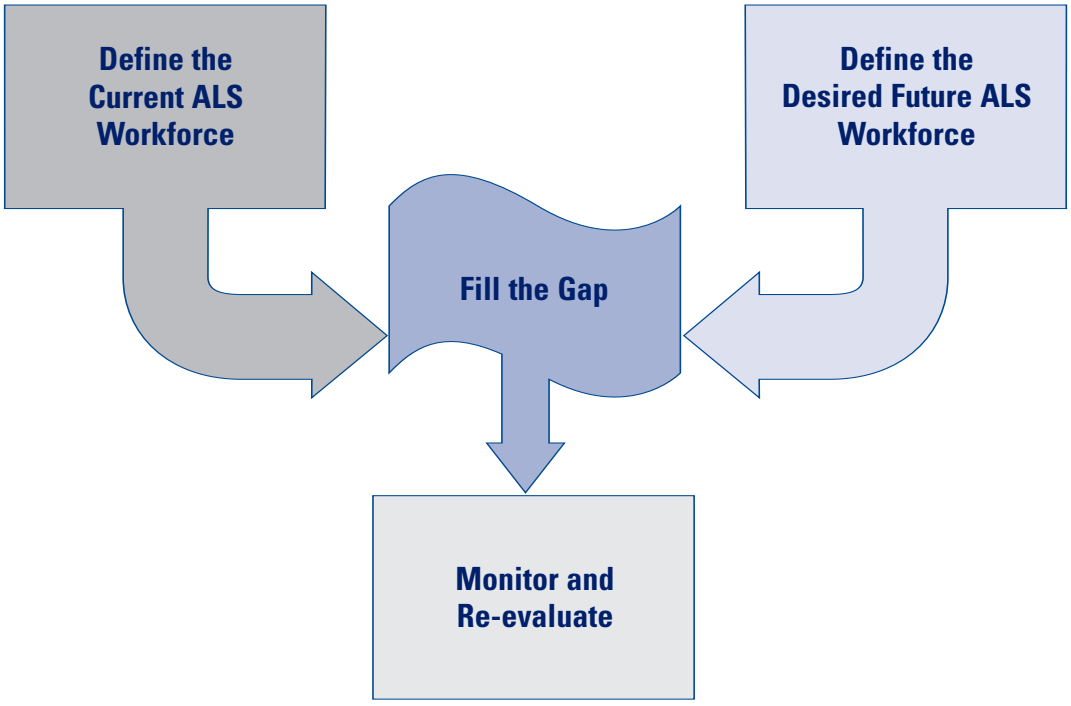
After completing this workbook you should be able to identify the key components necessary to develop a well conceived ALS Retention plan. Our hope is that you will come away with a thoughtful, disciplined, and effective ALS retention program for your EMS agency. Although there is a considerable amount of work to complete this workbook, we believe that *Keeping the Best!* of your ALS providers will be well worth the effort!

The Workforce Utilization Model

As mentioned in the Introduction, numerous factors impact the ability of your EMS agency to retain ALS providers. It is very likely there are several possible solutions to address these retention barriers. However, in order to go about developing the most effective ALS retention strategies, we need a framework to logically work though this process. The model we think would be the most effective to identify barriers to retention; establishing achievable objectives for the future, and monitoring your progress is what we call the Workforce Utilization model.

The model looks like this:

Figure 1



The Importance of Identifying an ALS Retention Project Team

As you begin this process we think it is important to select a project team to assist you as you work through this process using the workforce utilization model. Attempting to do the work and implement this model on your own will result in limited success. Beginning with a project team to help you collect data and create strategic goals is key to implementing a successful ALS retention program.

ANYBODY ELSE BUT STEVE...WHO DOESN'T WANT TO BE PART OF THE ALS WORKFORCE PROJECT TEAM?

With that said, we recommend you carefully select your project team members. The most successful project teams have four common denominators:

1. Members who are passionate about the project.
2. Members who hold each other accountable to meet timelines and deliverables.
3. Members who are willing to act as change agents to ensure the project team recommendations are adopted in the organization, and
4. Lastly, include members who represent the personnel impacted by the project. In this case ensure you have ALS providers on both your project team and implementation team.

Once you have identified your ALS workforce project team you are ready to begin to work through the steps of this model.

Description of the Model Steps in Figure 1

The Define the Current ALS Workforce and the Define the Future ALS Workforce in Figure 1 are illustrated side by side to indicate that they can be done concurrently. You could have one sub-team work on Defining the Current ALS Workforce and at the same time have another team work on Defining the Future ALS Workforce. You could also have the project team complete these steps one after the other. In the end, you want to make certain you work on the following activities in each of these steps.

Major Activities of Defining the Current ALS Workforce

It is essential to establish a through understanding of the current ALS workforce environment by performing analysis of factors that can be measured numerically (quantitative) as well as indicators that must be measured by workforce feedback and research (qualitative). By working through the worksheets and surveys in the workbook you will have a clear understanding of the drivers of your current ALS workforce environment. The steps performed are explained below.

1. Perform Quantitative Analysis through
   - Gathering demographic information of your coverage area and your entire EMS workforce
   - Reviewing historical turn-over and tenure statistics
   - Appraising utilization practices
   - Performing call volume/type analysis
   - Evaluating Response times, Shift schedules and resource deployment factors and
   - Analyzing EMS system infrastructure, new directives and community development factors

   Based on your quantitative findings you will develop a list of current ALS workforce opportunities.
2. Perform Qualitative Analysis through
   - Reviewing a summary of research with the four EMS retention principles.
   - Completing the qualitative surveys in workbook.

   Based on your qualitative findings, you will develop a list of current environment opportunities.

Major Activities of Defining the Desired Future ALS Workforce

Through guided visioning, we will assist you in determining the look and feel of the future ALS workforce. We accomplish defining the future through these steps:

1. Develop a vision for your ALS workforce of the future.
2. Consider ongoing directives and programs impacting your future ALS workforce.
3. Establish quantitative and qualitative factors of your ideal workforce.
4. Develop strategic retention goals

Major Activities of Fill the Gap

You will develop strategic initiatives or plans to fill the gap between the current ALS workforce and the desired future ALS workforce. We will lead you through this process by taking these steps:

1. Revisit the list of opportunities identified in the current environment research.
2. Rewrite the opportunities into strategic initiatives or plans.
3. Group initiatives into feasibility and priority groups.
4. Create a strategic ALS retention project plan.
5. Establish timelines, responsible parties and budgets for each initiative.
6. Implement the plan

Major Activities to Monitor and Re-evaluate

Once your ALS retention plan is in place, you will want to assess your level of success in achieving your objectives at regular intervals. The activities we will focus on to monitor progress include:

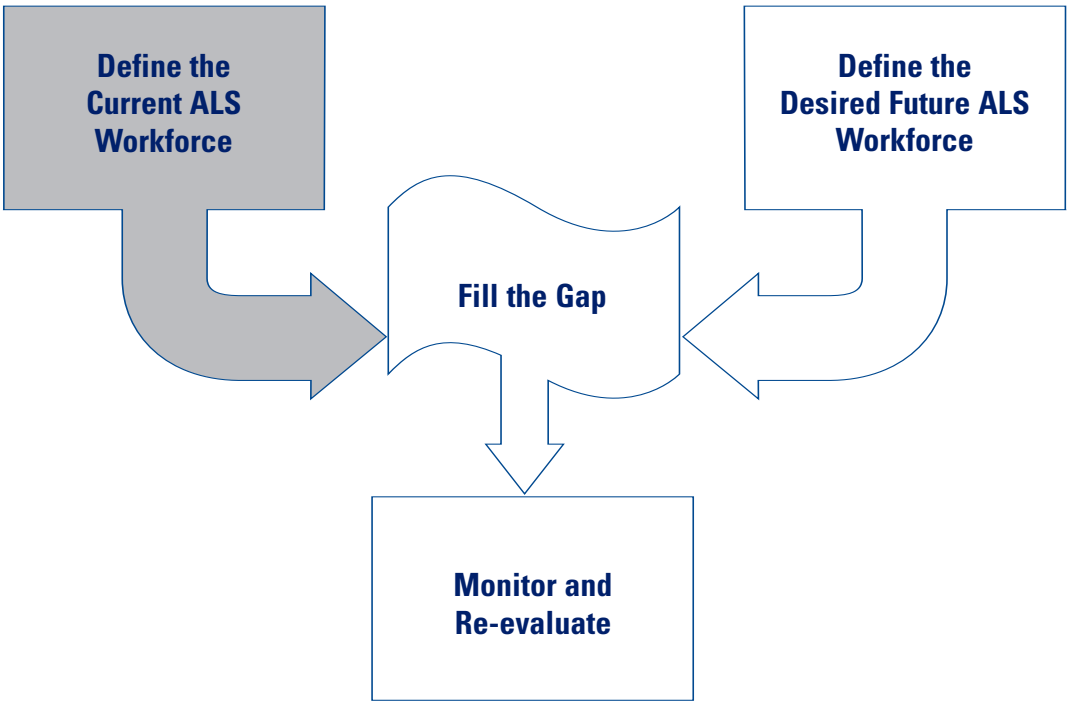
1. At established dates, monitor the success of the strategic ALS retention plan.
2. Re-establish timelines, responsible parties and adjust budgets as needed.
3. Set new initiatives based on major changes in the current ALS workforce.

Let's get started by defining your current ALS workforce, turn the page to begin.

Defining Your Current ALS Workforce – Quantitative Analysis

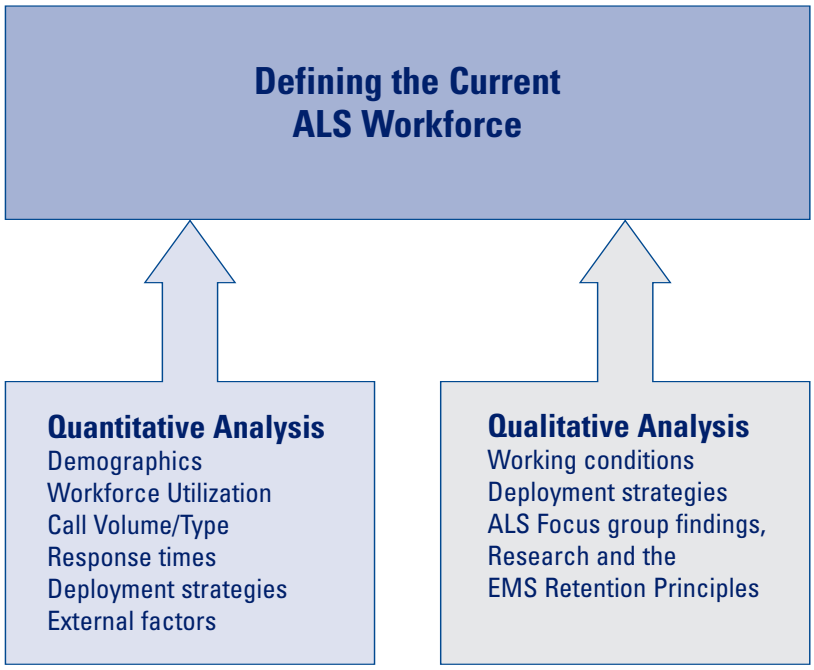
In Steven Covey's best selling book, The Seven Habits of Highly Effective People, he states, "begin with the end in mind". In the same way, an EMS leader or manager, who has a thorough understanding of his workforce, will be able to set realistic goals and objectives for retaining these highly skilled providers. In the diagram below we depict where we are in terms of the workforce utilization process.

Figure 2



To accomplish this first step in our workforce analysis, you will perform both quantitative and qualitative analysis of both your coverage area and your EMS workforce. The diagram below depicts the major activities in this step.

Figure 3



Quantitative factors are things that can be measured numerically. Examples include: demographic factors, workforce utilization practices, response times, call volume, and call demand analysis.

Defining your current ALS workforce should also examine qualitative factors, that is, those parts of the job environment that cannot be given a numeric value, but still impact your workforce. Examples of qualitative factors are working conditions and deployment strategies.

This section of the workbook will assist you in understanding the quantitative analysis of your ALS workforce. This analysis is depicted in the light blue highlighted area in Figure 3. We will address the qualitative analysis or the gray highlighted area in Figure 3, later in the text as we work through the EMS Retention Principles from our first retention workbook.

Now that we know what this chapter is all about, we need to warn you, this next step is not for the faint hearted. We will be asking you to compile a lot of data on your coverage area and on your EMS agency. We want you to go back for at least three years in history. Despite the amount of work needed to understand your current workforce environment, we believe you will find this work invaluable in selecting the ALS retention strategies you will adopt in the future.

Quantitative Analysis of Your Coverage Area

To begin this process we need to understand the broad demographics of your coverage area and then compare those demographics with those in your agency. You can obtain free information on the demographics of your coverage area from several sources. Here are three alternatives to research:

1. The planning department of your locality, city, or county.
2. US Census Bureau (2000 and 2004),
3. Weldon Cooper Center for Public Service, Virginia VELMA (2005)

We have developed two worksheets located in Appendix A and B to assist you in capturing data on your coverage area. All worksheets in this workbook can be downloaded by going to the OEMS website at: www.vdh.virginia.gov/oems. Click on the EMS Recruitment Directory/Workforce Retention Project link, locate the worksheets and download them. These downloadable worksheets already have the mathematical equations embedded in the spreadsheets to assist you in calculating percentages and totals.

You can assign one or more members of your project team to collect the quantitative information on your coverage area. At the same time, you can have another sub-team work on quantifying your agency demographics.

Quantitative Analysis of Your Agency Workforce

To assist you in understanding the quantitative trends in your agency, we have designed a couple of worksheets (Appendix C-F). These worksheets identify what we think are the most important data you should know about your workforce. Some of you may be thinking, "Why do I need to do this for all my EMS members, isn't this suppose to be a workbook on retaining my ALS providers?"

"OUR ALS PROVIDERS ARE A CLOSE KNIT GROUP – WE NEVER MISS AN OB/ GYN CALL."

If you have that thought, you are absolutely correct. This is an ALS retention workbook, but we also know that your ALS providers work in concert with the rest of your workforce. Therefore, understanding the quantitative trends of your entire agency also furthers your knowledge of your ALS workforce.

Some of you already have this information contained in your databases. If this is your situation, please begin answering the questions in the paragraph below.

Your Coverage Area and Your Agency Demographics

Once you have completed all the worksheets, you are now ready to view some of the trends of the data. We will begin with questions concerning your coverage area. Next, we will relate those facts to demographics in your agency, and finally we will ask you to list some implications of the data on your ALS workforce.

Population Trends in Your Coverage Area

What has been the trend of your coverage area's general population? More people in your coverage area mean greater call volumes for your agency.

Based on your data worksheets, circle the appropriate answer to the following questions.

The general population of your coverage area is:

Decreasing by less than 5%	Staying about the same	Slightly increasing by at least 5%	Increasing by more than 5%	Increasing by more than 10%
1	**2**	**3**	**4**	**5**

How about the 'over 65 years old population' segment in your coverage area? This segment of the population tends to generate the most EMS calls. As this segment of the population grows, so will your call volumes. The 'over 65 year old population' in your coverage area is:

Declining by 5%	Remaining about the same	Increasing by 5%	Increasing by 10% or more

How about the '20-34 year old population' segment in your coverage area? This sector of the population represents your potential new recruits. The '20-34 year old population' segment in your locality is:

Declining by 5%	Remaining about the same	Increasing by 5%	Increasing by 10% or more

Now let's compare these trends to those in your EMS workforce. What is the trend of your entire EMS workforce population over the last three years?

Decreasing by more than 5%	Decreasing by less than 5%	Staying about the same	Slightly increasing by at least 5%	Increasing by more than 5%
1	**2**	**3**	**4**	**5**

What is the tendency of your ALS workforce population over the last three years?

Decreasing by more than 5%	Decreasing by less than 5%	Staying about the same	Slightly increasing by at least 5%	Increasing by more than 5%
1	**2**	**3**	**4**	**5**

Is your ALS workforce keeping-up or falling behind the population growth rate of your locality? How might this information affect your ALS workforce? Please state your conclusions below:

Conclusions	Impact on my ALS Workforce

Now consider the impact of projected growth rates on these various population segments in your community. To the best of your ability, complete the following table:

Population Description	Projected Population Growth Rate 2000-2010	Projected Population Growth Rate 2000-2020
General population		
Over age 65		
20-34 year olds		
EMS Workforce Growth Rate		
ALS Workforce Growth rate		

Will your anticipated growth rates in your EMS agency keep up with the demand of an aging population? Will you have enough new recruits in your coverage area or surrounding counties to meet the demand for new EMS providers?

Please state your conclusions below:

Conclusions	Impact on my ALS Workforce

How does your coverage area's general population compare with the general population growth in surrounding counties? This data may be important when you consider mutual aid relationships and/or recruiting efforts. If surrounding counties are experiencing much higher growth than your locality, you may consider renegotiating mutual aid agreements. Low growth in surrounding counties may indicate there may be more recruits in your own backyard than in the surrounding counties. Please complete the following statement, the general population of your locality is:

Decreasing by 5 % or more as compared to surrounding counties **1**	About the same as surrounding counties **2**	Slightly increasing as compared to surrounding counties **3**	Increasing by more than 5% as compared to surrounding counties **4**	Increasing by more than 10% as compared to surrounding counties **5**

Is your locality population decreasing or increasing as compared to surrounding counties? What does this mean to your ALS provider workforce? Are they likely to leave your locality and join a county or city workforce with growing call volumes and thereby gain greater opportunities to practice their ALS skills? Based on your response to the question above, what conclusions might you draw when considering impacts on your ALS workforce?

Conclusions	Impact on my ALS Workforce

In summarizing, when comparing the population growth rates of your coverage area, surrounding counties, and your current workforce, what possible areas of improvement would you see as a result of this information? We have provided one example.

Possible Actions for Improvement

1. Based on the population growth rates of our coverage area, we need to increase our ALS recruiting goals.

Now list one or two possible actions for improvement:

Now let's drill down into the specific demographics of your EMS agency. Complete the Agency Personnel Roster located in Appendix C. By referring to both Appendix B and C, you will be able to complete the table below.

Demographic	Total #	% of Total Providers	# of ALS Providers	% of Total ALS Providers	% in Your coverage area
Female providers					
Black providers					
Hispanic/Latino providers					
Other Ethnicity					
Speak other than English in their home					

Does your current EMS workforce demographics reflect the gender/race demographics of your locality? What can you deduce from this information?

Conclusions	Impact on my ALS Workforce

Now let's take a look at some additional demographics of your agency. Use Appendix C to complete the following table.

Demographic	Total #	% of Total Providers	# of ALS Providers	% of Total ALS Providers
Agency members who are under 18 years of age.				
Providers ages 18-25.				
Providers ages 26-34.				
Providers ages 35-49.				
Providers ages 50-65.				
Providers with less than 2 years of service				
Providers with 2-5 years of service				
Providers with more than 5 -10 years of EMS service				
Providers with 10 or more years of service				

Now let's look at your data in the table above. What surprised you? What numbers or percentages caused you concern? Choose one or two demographics that are significant enough to look into and develop a plan to improve. Below we have given you an example.

Conclusion	Impact	Improvement
1. 50% of my EMS workforce is over 36 years old and 60% of my ALS workforce is over 36 years old.	1. As my workforce ages they may not be able to handle the physical demands of running calls.	1. Recruit younger members into the ALS workforce. Conduct research to identify equipment, i.e., stretchers and lifts, that helps move patients and ease the physical demands of my aging ALS providers.

Now it is your turn. Complete the following table.

Conclusion	Impact	Possible Action for Improvement

Let's continue learning more about your EMS workforce. Circle the appropriate answer in the questions below.

What trend do you see in your EMS workforce turnover rates in the last three years?

Decreasing by more than 5%	Decreasing by less than 5%	Staying about the same	Slightly increasing by at least 5%	Increasing by more than 5%
1	**2**	**3**	**4**	**5**

What trend do you see in your ALS workforce turnover rates in the last three years?

Decreasing by more than 5%	Decreasing by less than 5%	Staying about the same	Slightly increasing by at least 5%	Increasing by more than 5%
1	**2**	**3**	**4**	**5**

Compare the number of EMT-Intermediates over the last three years?

Decreasing by more than 5%	Decreasing by less than 5%	Staying about the same	Slightly increasing by at least 5%	Increasing by more than 5%
1	**2**	**3**	**4**	**5**

Now compare the number of EMT-Paramedics over the last three years.

Are they…

Decreasing by more than 5%	Decreasing by less than 5%	Staying about the same	Slightly increasing by at least 5%	Increasing by more than 5%
1	**2**	**3**	**4**	**5**

Based on this information, where might you begin to think about emphasizing your retention efforts?

Conclusions	Impact on my ALS Workforce

List below possible action steps you could take to improve the current issue(s).

Possible Actions for Improvement

Determine how ALS Personnel are Utilized in Your EMS Agency

Next, we are going to examine your workforce utilization practices. The answers to the following questions are found in the gray shaded areas of the completed Agency Personnel Roster, located in Appendix C.

Utilization Question	#	% of Total Providers	# of ALS Providers	% of total ALS Providers
Providers who hold leadership positions				
Providers currently in re-entry				
Providers who spend less than 50% of their shift answering EMS calls				
Providers who reside outside your EMS agency coverage area				
Providers whose commute time is over 30 minutes				
Providers whose reason for joining was wanting action or to run calls				
Providers whose reason to stay in the agency is now different than why they joined				
Providers who have left the agency in the last three years.				
Providers who left the agency with less than 3 years of service				
Providers who left the agency with more than 5 years of service				
Providers who left the agency for salary/compensation reasons.				
Providers who left agency due to burn-out.				
Providers who left the agency for reasons you do not know.				

As you can see, you can ask a number of questions based on the information contained in your Agency Personnel Roster. Additional questions can be added to this list but let us stop here and see if we can identify certain trends.

As we did before, review your data. What statistics jumped out at you? Of those facts, what caused you the most concern? Choose one or two factors that you feel are significant enough to look into and develop a plan to improve. Below we have given you a couple of examples.

Conclusion	Impact	Possible Action for Improvement
1. Only 5% of my agency personnel hold leadership positions yet 50% of my ALS providers hold leadership positions. Also 30% of my ALS staff runs EMS calls only half of the time.	1. Over 50% of my most tenured ALS providers have administrative roles. 66% of my ALS providers run many more calls than the remaining third. This explains all the griping I hear about being overworked from my younger ALS providers.	1. I should look into using some of my more seasoned EMT-B personnel in roles like Training officer, Treasurer etc. and I should address the inequity of the number of calls per ALS provider.
2. Of the providers that left our agency, over 70% reported salary compensation issues were the reason for leaving.	2. Our salary and compensation package may need improvement.	2. Have our recruitment officer perform a salary/compensation comparison with surrounding counties.

Now complete the following table based on your agency.

Conclusion	Impact	Possible Action for Improvement

Are you starting to identify some specific issues impacting the retention of your ALS workforce? Are you thinking about some possible solutions to these issues? Great, you are right on track. Now let's take a look at the calls your agency responds to and the impact this has on your ALS workforce.

Understanding Your EMS Call Volumes and Call Demand

To understand the day to day working conditions of your EMS workforce, we need to evaluate not only the call volumes, call type (ALS or BLS, nuisance) but also the call time trends of your EMS agency's emergency call responses.

Every licensed agency in the Commonwealth must complete a Pre-Hospital Patient Care Report (PPCR) on every emergency call response. This information is forwarded to Virginia Office of EMS (OEMS) for entry into their pre-hospital information database. The PPCR call report is a rich source of several quantifiable factors impacting your agency. Become familiar with all the data elements in this report. You can learn a great deal about your calls, your patients and your workforce by simply reviewing these call sheets.

Fortunately, you do not have to go through reams of call sheets to get at the data you need. OEMS will process data mining requests for your agency. To request specific data go to the forms section of the OEMS website at: www.vdh.virginia.gov/oems and download the Request for Pre-hospital Database Information form and fax in your request as directed. As with all reports however, the information you receive is only as accurate as the data that was given. For this reason, ensure your providers are consistently and accurately completing their PPCR reports.

Many agencies report that their call volumes are increasing. Also, many agencies have reported nuisance calls are on the rise and negatively impact the morale of their providers. Research suggests that between 25-30% of all EMS calls are dispatched as requiring ALS skills. Most EMS leaders, however, tell us that a much smaller number of EMS calls actually require ALS procedures and skills. How would you like to have solid figures on the type of calls your agency handles? Well, that is our next data research step.

Some of you may have access to call volume and call type information on your own databases while some of you will need to request this information from OEMS. In capturing this data, you will be able to determine if your ALS call volumes and types are increasing over time, remaining about the same or declining and by what percentage.

Once you can quantify this information, please complete the tables on pages 26 and 27.

	2003		2004		2005	
Call Volumes	**Total #**	**% of Total**	**Total #**	**% of Total**	**Total #**	**% of Total**
Calls During Year						
Emergency Response Non-Transport						
Emergency Response with Transport						
Dispatched as BLS Calls*						
Dispatched as ALS Calls						
Nuisance Calls**						

** Dispatched BLS and ALS calls can be determined by contacting your Emergency Communication Center, (ECC), for these numbers.*

*** Nuisance calls are typically defined by your locality. You should track your nuisance call volumes monthly and annually.*

What trends are you seeing? Are your call volumes increasing? Are your emergency response non-transport calls increasing or decreasing? What about your ALS call volumes? Are they increasing, remaining about the same or decreasing? Are the number of nuisance calls, increasing, or decreasing? How might these factors affect your ALS workforce? Summarize your conclusions in the space provided below:

Conclusions	Impact on my ALS Workforce

To further understand the work demands on your ALS providers, it is helpful to establish a clear picture of the number of dispatched ALS calls that actually end up requiring the ALS skills of your highly skilled workforce. To establish these indicators it would be ideal to capture this data for the last three years.

This information can also be found in the PPCR call reports. The PPCR contains a data element entitled 'Level of Care Provided' and contains two possible choices, ALS or BLS. The provider completing the PPCR report indicates the level of life support skills that were employed at the incident.

When you have tabulated this information please complete the following table. Note the first three columns can be taken from the previous table on page 26.

Year	EMS Calls	Total # Dispatched as BLS	# Dispatched as ALS	# of EMS calls requiring ALS skills	% of total EMS calls requiring ALS skills
2003					
2004					
2005					

Are the majority of dispatched ALS calls actually requiring ALS skills? Or are there fewer dispatched calls requiring the ALS skills of your workforce? Does declining calls requiring ALS skills indicate your providers have less opportunity to practice their advanced life saving skills? What does this mean to your ALS providers? Summarize your findings below:

Conclusions	Impact on my ALS Workforce

Now let's drill down and determine peak call volumes by time of day, day of week and month. Again, the PPCR report captures this information and you can request database research from OEMS. We have provided a data table in Appendix E to help you summarize your findings. When you have completed compiling this information, answer the following questions:

During what hours of the day do you historically experience your highest call volumes?

During what day of the week do you historically experience your highest call volumes?

During what month of the year do you historically experience your highest call volumes?

Do you staff your agency in accordance with your peak call volume hours? Or do you cover every shift with the same number of providers? Do you man every shift with the same number of ALS providers? What conclusions can you draw from this information? How do these call distribution facts impact your ALS workforce?

Conclusions	Impact on my ALS Workforce

Now let's summarize all the implications of this call data analysis. List below the three most significant impacts you discovered in this section. Next, write out some possible actions steps you could take to improve these facts.

Three most significant implications	Possible Actions for Improvement

Response Times, Shift Schedules and Resource Deployment

Another component of establishing the current environment of your ALS workforce is to analyze your response time goals, shift schedule(s) and your resource deployment strategies. Deployment strategies refer to how you position your ambulances/units and personnel to meet your call demands. Please answer the following questions:

What response times do you currently use in your coverage area. (circle all that are used).

NFPA* 1710/1720 standards	Response times are set by locality	Employ more than one response time within our coverage area	Other

* *National Fire Protection Association*

How about the frequency of not meeting your response time goals? Some of you undoubtedly have this information at your fingertips. For others, you can obtain this through a PPCR data mining request from OEMS.

Once you have this information, please answer this question. In the last year, my agency has met our response time goals:
(circle one)

Over 90% of the time	85-90% of the time	80-85% of the time	Less than 80% of the time

If the answer is less than 80% of the time, please indicate some of the reasons that may contribute to missing your response time objectives. Reviewing your call analysis in the last section, may be helpful when answering this question.

Reasons for not meeting Response Time Goals

Which current shift schedule do you employ with your ALS workforce in your agency? (circle all shift schedules used).

8 hour	10 hour	12 hour	14 hour	16 hour	24 hour	Supplement with part-time personnel

Which resource deployment strategy do you employ in your agency/organization? (check all that are used)

Deployment Strategy	What my Agency uses
Fixed Post – EMS or Fire Stations	
Hybrid – Fixed posts and temporarily located deployed units based on demand analysis	
Tiered – Fixed posts with some ALS and some BLS only units.	
Fully deployed – Ambulances constantly relocated in coverage area	
Other (Please describe)	

Now, let's review this section in light of the impact on your ALS workforce. For example, what is the consequence of numerous response times, shifts and deployment strategies on your workforce? What is the impact of having only one type of shift schedule on your ALS workforce? What about having one and only one deployment strategy? Based on the information above, what conclusions can you draw and what is the result of these factors on your ALS workforce?

Conclusions	Impact on my ALS Workforce

What actions can you take based upon this section? Please explain in the space provided.

Possible Actions for Improvement

Now that we have a good understanding of your coverage area and ALS workforce demographics as well as your call volume, response times and deployment strategies, let's take a look at infrastructure and technological factors impacting your ALS workforce.

EMS System Infrastructure, New Directives and Community Development

To round out your knowledge of the current workforce environment, consider factors external to your agency that can significantly impact your workforce. The EMS system infrastructure refers to various components of the EMS System in which your agency is involved. This includes everything from the dispatching system to the Emergency rooms and medical equipment. New directives can come in many forms; new regulations, protocols and other locality mandated

actions such as revenue recovery. Community development has to do with new growth in your coverage area. Examples could include new roads, subdivisions or growth of a large employer. We have developed some questions to help you assess all these external factors.

EMS System Infrastructure

Components of a typical EMS system have been identified in the table below. In the columns provided, list any current or anticipated change to that component in the next 2-5 years. Keep in mind any new technological advances impacting your local EMS system. Technological change is inevitable but too much change can stymie any organization.

EMS System Component	Current or Anticipated Change
Dispatching	
Communication Equipment	
Medical Apparatus • Equipment • Vehicles	
Modifications in EMS Protocols	
New hospitals or expanding medical facilities or changes in coverage area Hospital designations or services	
Adjustments in Business operations, procedures or technology	

Now let's consider how these current or anticipated changes may impact your ALS providers. Please complete the following table:

Conclusions	Impact on my ALS Workforce

New Directives

New directives can come from many sources to include your locality, your Operational Medical Director (OMD), the Emergency rooms in your coverage area, your Regional EMS Council and/or from OEMS. As an agency leader, you must establish communication channels with each of these entities to assure you are informed of new directives and changes. Do you currently have a point of contact with each of the organizations/people listed above?

If not, establishing contacts with each of these entities might be a possible action step to include at the end of this section.

To the best of your knowledge list below any new directives you are currently integrating in your agency. Also list any new directives you are expecting in the 2-5 years.

New directives currently or soon to be adopted by my agency.

If you have listed more than five new directives, how might these changes be impacting your workforce? How do these directives impact your ALS providers? Use the space below to record you conclusions.

Conclusions	**Impact on my ALS Workforce**

Community Development

Now let's consider the impact of community development and growth on your ALS providers. A good source to learn about changes in the roads, new building starts etc. is the planning commission of your city or county. Below is a list of community growth factors you might want to consider that are currently occurring or on the horizon in the next 2-5 years. Please, complete the table.

Community Growth Factors	Currently or anticipated to happen in my Coverage Area
New roads or road construction	
New nursing homes or expanding nursing homes	
New retirement communities	
New subdivisions	
Significant growth with large employer	
New business development	
Public transportation changes (buses, subway, airports etc.)	
Changes in HOV designations	
Other:	

What is the impact of these community growth factors on your EMS workforce? How do these changes impact your ALS workforce?

List below your conclusions

Conclusions	Impact on my ALS Workforce

Review this last section. Highlight one or two impacts for each of these last three external agency factors. Next, beside each impact, list a possible action step for improvement.

EMS System Infrastructure, New Directives, and Community Development	Possible Actions for Improvement
- Most significant implications	

Summarizing the ALS Workforce

Now let's summarize what we have learned in the quantitative analysis of defining the current ALS workforce (see Figure 3 on page 14). Turn back the pages of your workbook and look at some of the impacts and possible action for improvements you have identified.

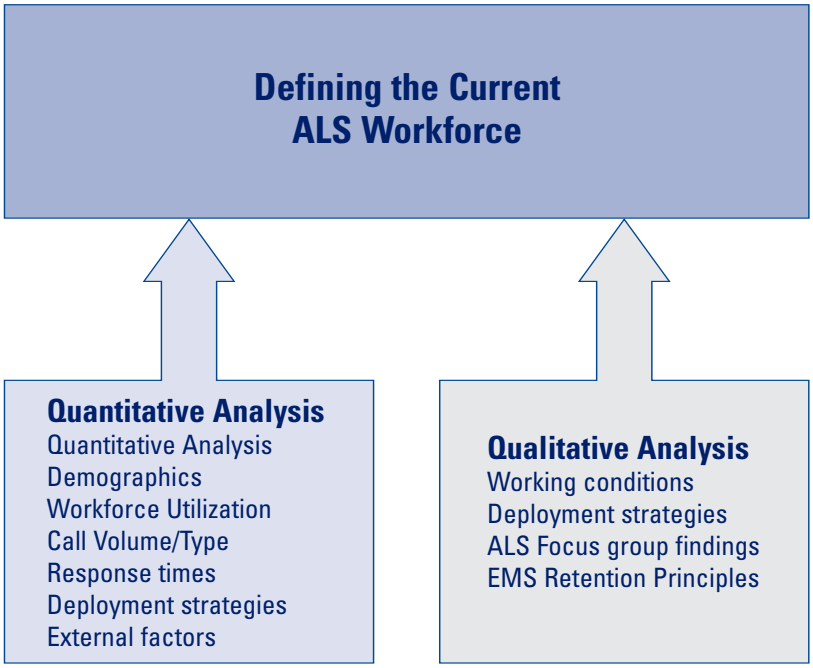
Are you beginning to see some common solutions? As you review each section, **highlight at least two actions from each section** and summarize on the table provided in Appendix L at the back of this workbook. You will be referring to this table several times as you continue to work through this tool. This Summary of Actions for Improvement table is also downloadable at the OEMS website at www.vdh.virginia.gov/oems. Click on the EMS Recruitment Directory/Workforce Retention Project link to locate the How to Retain ALS Providers Worksheets and download them.

List the actions you intend to take by completing the Summary of Actions for Improvement table at this time.

Congratulations! You have identified some possible action steps for retaining more of your ALS providers. Now, as we continue to define the current ALS workforce environment, we will delve into the qualitative factors impacting your ALS providers. To do this we will re-visit the EMS Retention Principles from the perspective of an ALS provider. Turn the page and read on.

Define Your Current ALS Workforce – Qualitative Analysis

Figure 4



Qualitative Analysis

The next step in defining the current ALS workforce is to perform qualitative analysis of your highly skilled personnel. As the figure above depicts we will be examining factors such as working conditions and deployment strategies. We will also review focus group and research findings.

EMS Retention Principles Re-visited

We began our series on the Retention tool kit introducing four EMS Retention Principles. Principles are ideas that can be used over and over in many different situations. By understanding the four core EMS Retention Principles, you will have more options when solving ALS provider retention issues.

We will take a look at these core EMS Retention Principles and then systematically apply them to retaining your ALS providers.

The Life Cycle Principle and the ALS Provider

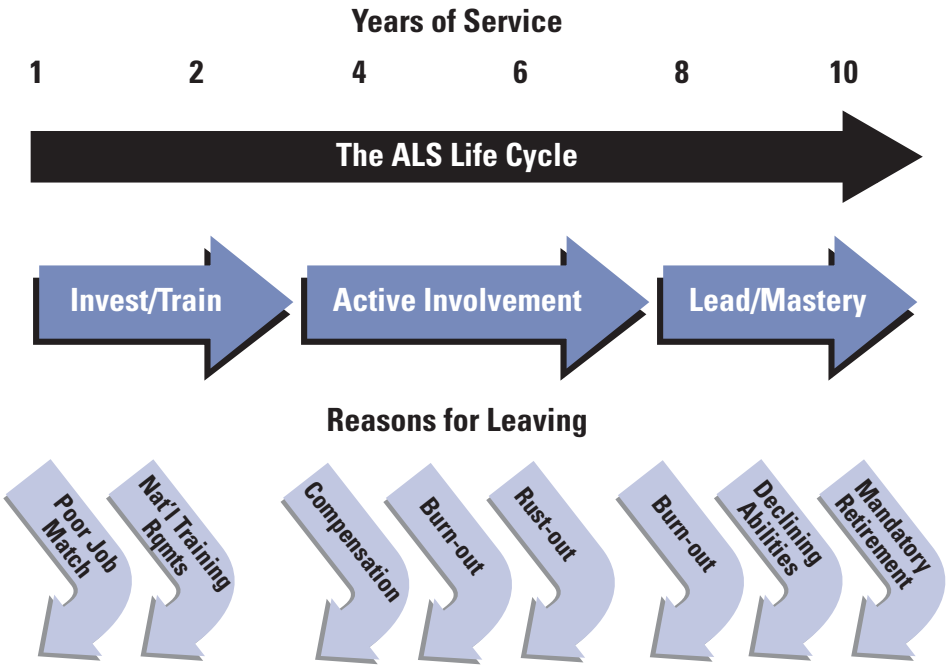
Simply put, this principle states:

EMS personnel stay longer when leaders take specific actions at specific points in the retention life cycle.

Your retention process should be designed to keep good people longer. Members are like clocks with retention springs. Over time, their retention springs are going to wind down and they will leave. Think of your ALS providers as being your most tightly wound members. They may have been in the organization five years longer than your other members and have invested more hours in training and attaining their certification levels. You can have them wind down quickly or keep them longer by doing things at particular times in their life cycle.

The Life Cycle Model

Here is how the principle looks graphically for the ALS provider:



Invest & Train

Some of your ALS providers come in as volunteers and obtain their BLS certification. They enjoy the work and decide to obtain advanced certification levels. Some volunteer providers are recruited by career or commercial EMS agencies offering free ALS training plus salary and benefits. Others receive their training from their volunteer agency and stay with the agency as well as pursue an EMS related career in a municipality or with a commercial EMS agency.

All prospective ALS providers find the time and money required to move from EMT-B to a higher certification level challenging. Candidates go through an intensive training period regardless of whether they are volunteers or career personnel. This training can be as little as a focused14 weeks to become an EMT-I or as much as two-and-a-half years to become a college degreed Paramedic.

During this invest and train phase, ALS providers tell us major retention barriers include poor job skills match, failure to meet or continue to meet national training requirements, and unanticipated demands of the job; including increased responsibility and stress. An example of a poor job skills match could be a firefighter who does not fully understand his/her sign-on requirements and simply does not have the skills or desire to complete mandatory ALS training. The exacting requirements of the National Paramedic curriculum could also be a barrier to retaining ALS providers in this phase. An aspiring ALS student might begin to see that current ALS providers are overworked and decide she/he simply does not want to work that type of schedule.

Active Involvement

In this phase, ALS providers become active in ALS service and delivery. They may become the Attendant-in-Charge (AIC) and then move to become a preceptor for new providers. The lead ALS provider is solely responsible for the EMS call. Because there are fewer ALS providers than BLS providers, ALS providers respond to more calls than BLS providers. The constant stress of being an AIC, combined with an inefficiently utilized ALS workforce, may result in burnout casualties.

Higher EMS certification levels mean these ALS providers are being sought after by agencies or organizations needing these advanced skills. Those in municipal or commercial EMS agencies may demand higher salaries and incentives. As a result, they may jump between career EMS agencies or take a higher paying position in a hospital. Fire base EMS agencies may require the ALS provider to be cross trained in fire suppression. Some ALS providers will leave because they do not want to be firefighters.

At the other extreme are agencies with lower call volumes that lose Intermediates and Paramedics because they are bored and do not get enough opportunity to practice their ALS skills. These ALS attrition casualties are referred to within the EMS industry as “rust-outs.” Providing unique training opportunities using new medical devices or technologies can be an effective means of continuing to engage these highly motivated provider’s minds. Examples suggested by our ALS focus group included offering field training such as Rapid Sequence Intubation (RSI) or other types of progressive protocols.

The most common retention barriers identified by our focus group during this phase of the life cycle are somewhat different for volunteer and career EMS personnel.

Type of Agency	Common Retention Barriers in Active Involvement Phase
Volunteer	1. Loss to Career or Commercial Agency for better compensation or boredom/rust-out 2. Burn-out 3. Failure to complete recertification requirements
Municipal/Commercial	1. Dissatisfaction with salary and benefits resulting in moving to another agency or leaving EMS entirely. 2. Improper utilization resulting in burn-out or boredom/rust-out. 3. Required fire training for fire based EMS agencies

Lead & Mastery

In this phase the ALS provider determines to what extent they want to be involved in the agency by taking on greater leadership roles or increased levels of certification and specialized training. Some ALS providers will choose to pursue greater levels of certification going from an EMT-I to EMT-P. Some of these mastery level ALS providers will remain primarily EMS-delivery focused and may not seek administrative roles. The Flight Paramedic is an example of an ALS provider whose primary job responsibilities are providing emergency medical care and not managing those who respond to EMS calls.

Some ALS providers in the Lead & Mastery phase will move into higher and higher supervisory positions. Some become managers such as a Battalion Chief in fire-based organizations or operational managers in commercial or volunteer EMS agencies. Whether career, commercial or volunteer, most ALS providers in this phase take on more and more administrative responsibilities. Running calls is no longer their main job responsibility. When they choose an administrative career path, they will have more difficulty staying on top of their ALS skills. Some younger ALS providers report they resent these providers for no longer pulling their share of the ALS workload.

Some municipal ALS providers in the latter stages of this phase retire from career ALS work and re-enter volunteer agencies. Volunteer agencies can be appealing to the aging ALS provider because the volunteer agency may be smaller, less bureaucratic and run fewer EMS calls.

During this phase, the ALS focus group identified these common barriers to retention.

Type of Agency	Common Retention Barriers in Lead & Mastery Phase
Volunteer	1. Burn-out 2. Declining ALS competencies 3. Declining physical stamina
Municipal/Commercial	1. Burn-out 2. Declining ALS competencies 3. Mandatory retirement 4. Declining physical abilities

Invest/Train Phase

Let's apply these concepts to the ALS Providers in your agency.
Rate your agency using the following scale:

High – We do this and do it well.

Medium – We do this now, but not consistently—could use improvement.

Low – Maybe we should take a harder look at this.

Current Action/Programs for Invest/Train ALS Providers	Rating
1. Our recruiting program seeks to identify highly motivated applicants who could become ALS providers. ALS certification is promoted as a reasonable career path for all aspiring candidates. We identify at least 10% of each application pool as candidates to offer ALS training.	
2. Our program to identify highly motivated agency members and offer them ALS training is very effective. We screen our applicants for the most suitable candidates.	
3. Selected candidates have a clear understanding of ALS provider responsibilities and career progression options as well as ALS compensation and benefits packages prior to enrolling in higher levels of certification.	
4. We have at least a 90% completion rate for BLS providers enrolled in ALS certification courses.	
5. All newly certified ALS providers receive preceptor training within 3 months of their certification.	

Note: These are our standards. Your agency may have more or less stringent standards. We feel it is important to set standards so you can measure your progress. If you do not like these standards, then establish ones that make sense to you. The key here is to get potential ALS providers trained as soon as possible so they are active and contribute to your workforce.

So how did you do? Are you doing more than this during the invest/train phase with your potential ALS providers? Great!

Now go back to the areas where you scored medium or low. Choose one and take time to understand why it's not working the way it should. Put it on your "watch" list. You may decide to add it to your Summary of Actions for Improvement worksheet located in Appendix L, the last two pages of the workbook.

Active Involvement Phase

Rate your agency using the following scale:

High – We do this and do it well.

Medium – We do this now, but not consistently—could use improvement.

Low – Maybe we should take a harder look at this.

Current Action/Programs for Invest/Train ALS Providers	Rating
1. We have a program that seeks to address utilization and rust-out/burn-out issues quickly and effectively. ALS certified agency members feel they are held in high esteem. Our ALS turn-over rate is less than 5% a year and we have to turn away 20% of the agency members wanting to become ALS provider applicants.	
2. We have an on-going process that seeks to compare salary and compensation packages with agencies in our surrounding areas to ensure our package is competitive. Through our benefits package, we constantly seek new and innovate ways to reward our ALS providers.	
3. We effectively communicate our salary and compensation packages to our ALS providers and potential recruits.	
4. Recertification training is available, affordable and accessible for our ALS providers. We have less than 5% of our ALS providers in re-entry.	
5. We have an on-going ALS training program that provides unique and state-of-the-art technology and equipment. Our training classes are well attended.	

Remember the goal of the active involvement phase is to have a "win-win" relationship with your ALS providers. There needs to be a lot of dialogue to understand what your ALS providers are interested in achieving to keep them actively involved.

See any thing that needs addressing? If so, highlight it and consider if you need to add to your Summary of Actions for Improvement worksheet located in Appendix L.

Lead/Mastery

Rate your agency using the following scale:

High – We do this and do it well.

Medium – We do this now, but not consistently—could use improvement.

Low – Maybe we should take a harder look at this.

Current Action/Programs for Invest/Train ALS Providers	Rating
1. Annually we identify at least 20% of our high potential ALS providers and reinvest in them to prepare them for leadership roles or move them to mastery in technical skills.	
2. We have an on-going program that addresses issues facing an aging workforce to include technology and equipment to help them do their job as well as identifying re-entry of valuable retirees.	
3. Our retirement packages are reviewed at least bi-annually to make certain they are competitive with other agencies in the state. We involve our ALS providers in refining retirement packages.	

You may be wondering why we did not suggest trying to get all your ALS providers to a mastery level. For one, most agencies do not have the funds available to provide this type of training for everyone. Also not all your providers will seek more certification or greater leadership roles. Invest in those you believe will pay the greatest dividends to your agency. This is why you must make the effort to know your ALS providers goals and aspirations.

What areas did you score low on? Highlight these areas.

Now, let's review this section. Did you see one or two programs or issues that require immediate attention? Are these programs or issues different from those listed on your Summary of Actions for Improvement in Appendix L? If so, let's add them to your list.

The Belonging Principle and the ALS Provider

In October 2005, the South Carolina EMS Educators Association sent out a newscast entitled, "Paramedics say low pay, Morale forcing them out." The article goes on to describe how 18 EMT-Ps quit working for Greenville County and another 15 reduced their hours to part time only. A retired Captain wrote to the county administration and noted that the Paramedics' "salaries are wholly inadequate and their facilities are cramped and stressful." One of the Paramedics who quit was interviewed. Her reason for leaving was,

"Morale is horrible; I mean I can sum it up in those words. We feel like nobody cares about us."

Let's hope you do not have these kinds of feelings in your agency but keep in mind, violation of a person's need to belong will result in a provider, and possibly more than one, leaving your agency.

To begin, we need to review what this important principle means. We will then relate it to what we know about ALS providers from various sources.

The belonging principle states that

- EMS personnel feel welcome when all members accept them into the agency. This feeling should continue throughout the relationship and not just at the start of their membership. Unfortunately, some members "wear out their welcome."
- EMS personnel feel needed when they are asked to contribute to the agency's success. This feeling deepens as the squad comes to rely on them. Do not confuse asking members to do jobs that no one wants to do as fulfilling this need.
- EMS personnel feel respected when others value what they do or say. This is such a strong need that high levels of disrespect can result in some people "going postal."

We can summarize this principle as:

EMS personnel stay longer when they feel welcome, needed and respected.

This principle applies to your ALS providers too. Let's take a look at what some ALS providers have said about common violations of this principle. Then we will see if any of these ideas can help you in defining ALS retention programs in your agency.

Based on the results of the LEADS project we know that Paramedics on average have about 4-5 years of experience over EMT-Bs. Your senior ALS providers have the greatest length of service in your EMS agency. They may be developing the

belonging norms of your agency. When this group becomes dissatisfied as in the Greenville County story above, they may have a great deal of influence over the rest of the agency members.

Lessons from the Virginia ALS Focus Group

The ALS focus group put together in the development of this workbook, gave these examples of common violations of this principle. ALS providers report they feel undervalued and are shown disrespect when:

- Patients are "dumped" on ALS providers by EMTs. This sometimes occurs because the EMT is scared or uncertain of his medical skills. In other instances, agency management expects the ALS provider to take over on most EMS calls.
- They are asked to continually do more by their agency, Medical Director, Emergency Room Physician and/or the public, etc. Examples include requiring ALS providers to do the paperwork for directives like revenue recovery. Other examples include new requirements from medical facilities as to where to deliver the patient. Some providers were asked to take the patient not to the Emergency Room but to a department in the hospital, such as Labor and Delivery. The focus group referred to this phenomenon as "mission creep" and stated not knowing the extent of the job requirement fuels an undervalued mentality.

If an ALS provider is truly valued and respected in his agency, he will not experience feeling "dumped on" or abused. However, instead of feeling like the quarterback, some ALS providers feel like pack mules with more and more tasks added to their load.

The Chesterfield County Fire and EMS Example

We can learn more about these ALS perceptions in the Chesterfield County Fire and EMS ALS Workforce Final Report, dated May 4, 2004. Chesterfield County's ALS work group that conducted the research for the report engaged numerous focus groups as well as a survey on an Intranet site to identify the retention barriers of their ALS workforce. Both BLS and ALS providers were solicited in this information gathering process. The top two cons of being an ALS provider were the same for both provider groups. The top two cons for being an ALS provider include:

1. The workload for an ALS provider was considered to be much greater than that of a BLS firefighter.
2. ALS providers feel they were not being paid what they were worth and BLS providers see what ALS providers go through on a daily basis, know what their compensation is and felt that the two are inequitable.

The report went on to mention that because there were about twice as many BLS providers as there were ALS providers in the county, ALS providers ended up riding the ambulance more often. In some instances, only one ALS firefighter was assigned to a station and that one provider is on the ambulance every shift day.

Can you see how the need to belong was violated for these ALS providers? These highly skilled providers did not feel respected or valued. Further, BLS providers recognize the workload and compensation inequities and determined becoming an ALS provider may not be worth the effort.

The Belonging Survey

Fortunately, Chesterfield County Fire and EMS has taken significant steps to address these and other issues found in the report, but we can learn from this study. Please complete the following survey.

Rate your EMS agency using the following scale:

High – We do this and do it well.

Medium – We do this now, but not consistently – could use improvement.

Low – Maybe we should take a harder look at this.

Current Action/Programs for Invest/Train ALS Providers	Rating
1. Overall my ALS providers feel needed, welcome and respected in our agency.	
2. My agency's scheduling system is developed with the input of my ALS providers. We attempt to incorporate both flexibility and equity in scheduling our ALS workforce.	
3. Our ALS training programs are designed to show value to providers who go for further certification levels. We attempt to reduce barriers to attend training.	

How did your agency do? What areas could you improve? Remember to add these areas to improve to your Summary of Actions for Improvement worksheet located at the end of the workbook.

The Success Principle and the ALS Provider

Your ALS providers are achievers. You know this is true because of the tremendous amount of time your providers put into obtaining and maintaining their certifications. Many of these personnel are motivated by the fact of securing higher salaries and benefits as a result of achieving higher levels of certification and responsibility.

Do you realize they want to keep achieving? Is your agency supporting this principle or are some of your programs hindering your ALS providers from achieving their personal goals? Do you have some means of identifying your ALS provider's goals?

Lots of questions. Fully understanding what is considered success to your ALS providers will aid in your retention of these highly skilled providers.

This third principle can be stated as:

EMS personnel stay longer when they achieve success in important goals.

How do we apply this to your ALS providers? Let's find out what is important to ALS providers and see if your current programs support these goals. Much of the information on this principle can be discovered only through surveys and focus groups of your ALS workforce or by personally interviewing your highly trained providers.

Once we identify some of these qualitative factors in your agency, we will identify ways to improve current programs and stop conducting certain programs that do not support the Success Principle.

As we stated earlier in the workbook, the 2000 LEADS Interim Report cited:

- Less than half, 47.2%, of Paramedics were satisfied with opportunities for advancement.
- 92.3% of paramedics felt advancement was moderately or very important

Clearly, Paramedics want to advance and feel it is very important.

The NAEMT Survey

A survey was conducted for the National Association of Emergency Medical Technicians (NAEMT) in June and July 2005. A total of 1,356 NAEMT members participated in the survey. Researchers uncovered the following success work factors for their members:

When asked, "What do you value most about working in EMS?" 87% of those surveyed said "the opportunity to help people in need," 63% cited "the opportunity to give back to the community," and 62% noted "the opportunity to work in a variety of settings" and "the desire to work in a medical profession." The more pragmatic reasons for working in EMS included the fast-paced work environment and the flexible schedule.

Of those surveyed, 64% work as paramedics and 36% are EMTs; 80% are paid and 20% are volunteers; 66% of the paid workers are full-time employees, and 14% are paid, part-time employees.

Since the majority of those responding to the survey are ALS providers it can be assumed that the desire to help those in need, give back to their community and have a variety of work settings are important success factors to these providers. Does this sound like your ALS providers? Do they get the opportunity to give back to the community, use their medical skills and work in a variety of settings?"
In the same survey, these providers were asked their major concerns related to their chosen profession. The concerns cited most often by respondents were:

- Training and education of EMS personnel;
- Quality of patient clinical care; and
- Funding for EMS.

Another revealing finding was that a majority of those surveyed (65%) said that they are not adequately compensated for their work.

In order for ALS providers to feel successful, they want quality training to provide quality patient care and they want to be compensated fairly.

These findings concur with those found in the Chesterfield County Fire and EMS ALS workforce study. The project concluded that workload and compensation were the biggest barriers to ALS provider retention.

The Give/Get Checkbook

As we mentioned in our first workbook when a member joins an agency, they start a personal give/get checkbook. As long as a member believes he is getting more than giving, he will feel successful in the agency. An effective leader finds out what the member expects from the agency and works to keep a positive balance in the checkbook. When the balance becomes too far overdrawn, the member will leave.

From what we know, a typical ALS provider's give/get checkbook might look like this:

What I will give my agency	What I expect to get in return
• Become ALS certified and maintain my certification. • Pull my shifts • Attend meetings and training • Develop quality medical skills • Fill out required paperwork	• Feel good about giving back to my community. • Be given ample opportunity to practice my medical skills • Be compensated fairly

With your ALS providers you need to check with them at least annually to see if things have changed with the member's needs and expectations. Focus groups and surveys are great instruments to gather this data.

Asking a series of open-ended questions is one means of soliciting this information.

Here are some examples:

1. Please rate on a scale of 1 to 10 with 10 being the highest level of satisfaction, your level of satisfaction as an ALS provider over the past year.
2. What kept you from rating your satisfaction higher (assuming it was low score)?
3. What are the pros of being an ALS provider in our agency?
4. What are the cons of being an ALS provider in our agency?

Focus groups like these will help you uncover some of the quality ALS work issues in your agency.

We uncovered a lot of unmet needs in our ALS Focus Group formed for this workbook. The focus group cited many examples of inherent problems in the system that kept them from feeling successful. Those findings are summarized below:

- Being an ALS provider may hold you back from promotions because your skills are needed on the street.
- National training requirements – Does adding 16 hours of anatomy and physiology make a better Paramedic? A new EMT-P is taught to pass a test not care for a patient.

- No set protocols with Hospital Emergency Rooms (ER). ALS providers always have more than one boss; the OMD, the ER doctor on call, different standards among counties and regional areas and different drug "boxes" for different counties in coverage areas.
- We run too many nuisance calls and do not get time to practice our skills.
- Emergency Room documentation requirements keep increasing.
- Many EMS agencies have adopted revenue recovery and this adds to the administrative workload.
- There are so many gray areas in service areas. In the past, we used to take patients only to the ER, now we take them to the Cath Lab, or Labor and Delivery, etc.

Do any of these complaints register with things you have heard from your ALS providers? What are you doing to assess your ALS providers' checkbooks? Perhaps you should ask them in order to better understand their expectations and unmet needs.

The Success Survey

Now let's look at programs you have to support the Success Principle. Rate your agency using the following scale:

High – We do this and do it well.

Medium – We do this now, but not consistently—could use improvement.

Low – Maybe we should take a harder look at this.

Current Action/Programs for the Success Principle with your ALS Providers	Rating
1. We have a program established to assess our ALS provider's give/get checkbooks and address unmet needs of these providers.	
2. We have an on-going career progression program that helps us identify the aspirations of our ALS providers. There are clear progression paths and clearly understood compensation packages for ALS providers who want to focus on running calls and developing their medical skills as well as providers who want to take on greater supervisory roles.	
3. My agency's ALS training program includes a variety of educational opportunities and ensures that continuing education important to my ALS providers is available, affordable and assessable.	
4. We have a public education program in place aimed at reducing the number of nuisance calls that negatively impact my EMS workforce.	
5. I work closely with my locality, OMD, ERs, and Regional EMS Councils to establish consistent, easily understood protocols for my ALS workforce.	

What are the areas that you need to work on? Are these areas you discovered earlier in the workbook? If you need to, add these ideas to your Summary of Actions for Improvement worksheet in Appendix L at the end of the workbook.

The Friends & Family Principle and the ALS Provider

People have a deep need to feel connected to others. This principle can be summarized as follows:

EMS personnel stay longer when they develop strong personal relationships within the EMS agency.

Successful EMS leaders begin with the end in mind. They

- Create an atmosphere that breeds the formation of friends and a family feeling
- Step in when there are challenges to this atmosphere and protect it.

The Farming Metaphor

In the first workbook of the Retention Toolkit we use a farming metaphor to understand this principle.

Till the Soil – Is the current condition of your EMS agency environment hospitable or full of rocks so no one can break into the soil? Are there numerous cliques? Is there dysfunction?

Plant the Seeds – Refers to carefully selecting your new members who join the team and can add to the friends and family environment. Do you carefully consider who joins your EMS agency or do you just look for warm bodies?

Fertilize and Water – Refers to the values and support activities the leaders use to nourish the family friendly environment. Do you promote agency wide gatherings and show by your actions that you do not tolerate favoritism or cliques?

Get Rid of the Weeds – Means regularly weeding out those members who do not support a friend and family environment. Do you identify people who are disruptive and give them a "stay or go" decision?

Now let us apply this to what we know about ALS providers. We know your ALS providers are traditionally the more tenured of your members and often are the appointed officers and leaders in an agency. For this reason, whether they realize it are not, they have been helping to form the culture and environment of the agency for some time. Therefore, it is important you evaluate your ALS providers on a regular basis to certify that they are continuing to have a positive influence on the family-like environment of the agency.

More Lessons from the ALS Focus Group

Our ALS focus group described the personality strengths of ALS providers:

ALS Provider Personality Strengths

- Go-getters
- Class A personality – aggressive
- Smart
- Think quickly on their feet
- Interact well with people
- Adrenaline junkies
- Like challenges

Now these attributes sound like people we would all want to have on our team, right? If some of your ALS providers come to mind as you read this list, write their names in the space provided below. An example is provided to assist you.

ALS Providers who contribute to family friendly environment of the agency.	What is it that they do?	What can I do to support them?
John Carson	*He is constantly teaching younger medics about new medical techniques. He jokes with them and makes them laugh.*	*I can thank John publicly for taking interest in our younger providers.*

Now let's make some decisions. What are one or two actions you can take in your agency to use this principle with some of your contributing ALS providers this month? Complete the table with ALS providers in your agency.

ALS Providers who contribute to family friendly environment of the agency.	What is it that they do?	What can I do to support them?

We also asked the ALS focus group what were some personality weaknesses of ALS providers. The following list was created:

ALS Provider Personality Weaknesses

- Know-it-all attitude, which does not encourage new EMT-Bs to become ALS providers
- May show no common sense, especially the new and inexperienced medics.
- Pack mules - they do everything
- Burn out casualties
- Highly stressed and as a result can develop health problems

Do any of these statements describe some of your ALS providers? Are the same people on both of your lists? If so, that is easy to understand – any strength when pushed to an extreme will become a weakness. A content ALS provider, who is consistently overworked, can become a very discontented ALS provider.

The challenge of an effective EMS leader is to recognize when good members become discontented. Stress and burn out are generally symptoms of deeper more pressing issues. Nonetheless, some of your ALS providers will become consistently disruptive. These are the individuals you must take steps to remove from your agency because as an ALS provider they have greater influence on others in the agency. If you do not deal with the negative people, the whole agency will pay a price.

Read down the liability list again. In the space provided below, list ALS providers who are consistently not contributing to the friends and family environment of the agency. An example is provided that might help your efforts.

ALS Providers who consistently disrupt the family friendly environment of the agency.	**What is it that they do?**	**What can I do to get them to change or leave?**
Marvin Jones	*He is a know-it-all. He refuses to let others work with him. Most of the BLS providers hate driving with him because he always seems angry and impatient.*	*I will have a "shape up or ship out" conversation with Marvin by next week.*

Now let's make some decisions. What are one or two actions you can take in your agency to use this principle with some of your disruptive ALS Providers this month? Complete the table with ALS providers in your agency who are disruptive.

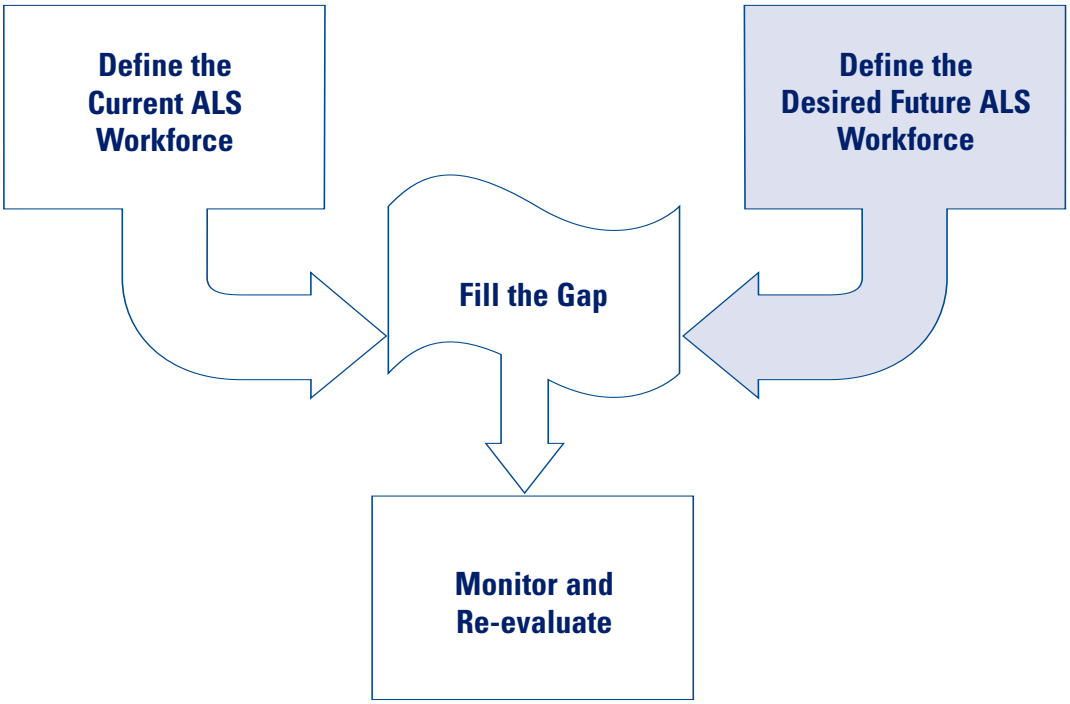
ALS Providers who consistently disrupt the family friendly environment of the agency.	**What is it that they do?**	**What can I do to get them to change or leave?**

Now let's review this section. Did you see one or two programs or issues that require immediate attention? Are these programs or issues different from those listed on your Summary of Actions for Improvement worksheet located in Appendix L at the end of the workbook? If so, let's add them to your list.

Defining the Desired Future ALS Workforce

Yogi Berra, the famous baseball personality, once said, "If you don't know where you're going, you'll end up somewhere else." While we all know this statement to be true, how many of us plan with this thought in mind? Knowing where you want to go is equally as important as having a full understanding of your current workforce environment. In this chapter you get the opportunity to be a visionary. You get to design the look and feel of the future ALS workforce in your agency. Refer to the diagram below to see where we are in our workforce utilization model.

Figure 5



To assist you in the process we will take you through a four-step process:

1. Working from your agency vision and mission statements, develop vision and mission statements for your ALS workforce of the future.
2. Consider ongoing directives and programs that may positively or negatively impact your future ALS workforce.
3. Establish quantitative and qualitative factors of your ideal workforce.
4. Develop strategic retention goals

Develop Vision and Mission Statements

Establishing a vision and mission for your ideal ALS workforce creates a focused approached to your ALS retention efforts. Let's begin by defining these two terms:

Vision – A brief sentence, statement or phrase that describes how the organization wants those they serve to see them.

Mission – A brief sentence or statement, which states why the organization exists and how it serves its stakeholders.

When developing your ALS workforce declarations, begin by reviewing your agency's vision and mission statements. This ensures any new actions or plans align with the current purpose and direction of your agency. Further, your agency's vision and mission statements can provide helpful ideas in creating your ALS workforce vision for the future.

Below are a series of questions you and your project team should attempt to answer before writing your vision statement for the ALS workforce of the future:

- What would your ideal ALS workforce look like in 3-5 years?
- What role does ALS retention play in your organization?
- What do your highly skilled personnel think about the retention efforts? Are they obvious? Do members know what efforts are being made to retain members?
- What will the components of an ALS retention program include?
- To what lengths will your organization go in order to retain an ALS provider?
- How will your ALS workforce feel about retention?
- How will other agencies describe the ALS retention programs in your organization?

After considering these questions, write a vision statement for your ALS workforce of the future. We have provided some examples below.

Sample ALS Workforce Vision Statement

The future ALS workforce at the XX agency will be well trained, highly motivated, and a cohesive group of specialized providers. Other agencies will look to XX agency as a model agency for retaining ALS providers.

Sample ALS Workforce Mission Statement

Our highly skilled ALS providers will choose to stay in XX agency, as our retention procedures appear effortless. Behind the scenes, a standardized process of activities will be integrated into the day-to-day operations and culture of XX agency.

In the space provided below, write your vision and mission statements for your agency's ALS workforce of the future.

Vision for the ALS Workforce of the Future

Mission for Your ALS Workforce of the Future

Future Directives and Mandates

As described in Defining the Current ALS Workforce chapter of the workbook beginning on page 13, directives or mandates come from many sources and include your locality, your Operational Medical Director (OMD), the Emergency Rooms in your coverage area, your Regional EMS Council, and/or from OEMS. Strong communication channels developed with each of these entities is the best way of ensuring you are aware of mandates in advance. To the best of your knowledge, list below any new directives you know that are on the horizon in the next 2-5 years that will impact your EMS workforce:

New Directives or Mandates in the next 2-5 years

What is the impact of these mandates on your future Agency workforce? What specifically would be the impact on your ALS workforce?

Impacts on Agency Workforce	Impacts on ALS workforce

Next, we would like you to consider on-going initiatives including retention programs that may impact your future ALS workforce. List in the space provided all current agency programs and initiatives that will influence your future workforce.

Current Agency Programs	Impacts on future ALS workforce

What actions might you take to mitigate some of these impacts on your future ALS workforce?

Possible Actions To limit Impact of On-going Programs and Future Directives

Now let's keep these impacts in mind as we work through the next step of Defining the Future ALS Workforce.

Establish Quantitative and Qualitative Factors of the Future ALS Workforce

Based on the vision you defined for retention, what should the strategic goals be? How should they be measured? What systems do you currently have in place to be able to track and measure the goals and what systems do you need to put in place to be able to track and measure the goals?

In this step, we work through establishing criteria to describe the ALS workforce of the future. We have developed a list of categories we feel are the most important in achieving your future ALS workforce. This list includes:

- Membership
- Member Morale/Satisfaction
- Training
- Effectiveness of Leadership
- Communication
- Team Cohesiveness

Strategic goals should be quantifiable and have a specific date to be accomplished. When setting goals for each of these categories you need to define:

- Type of Measure for that category. For example, morale could be measured by responses on a survey or number of ALS member complaints.
- Specific Goal – Quantifiable objectives by a specific date
- Tracking – Defines what you will track to measure the goal.
- Baseline – Current data you have on the goal
- Target – The new target
- System to track and measure – System or process to measure the goals

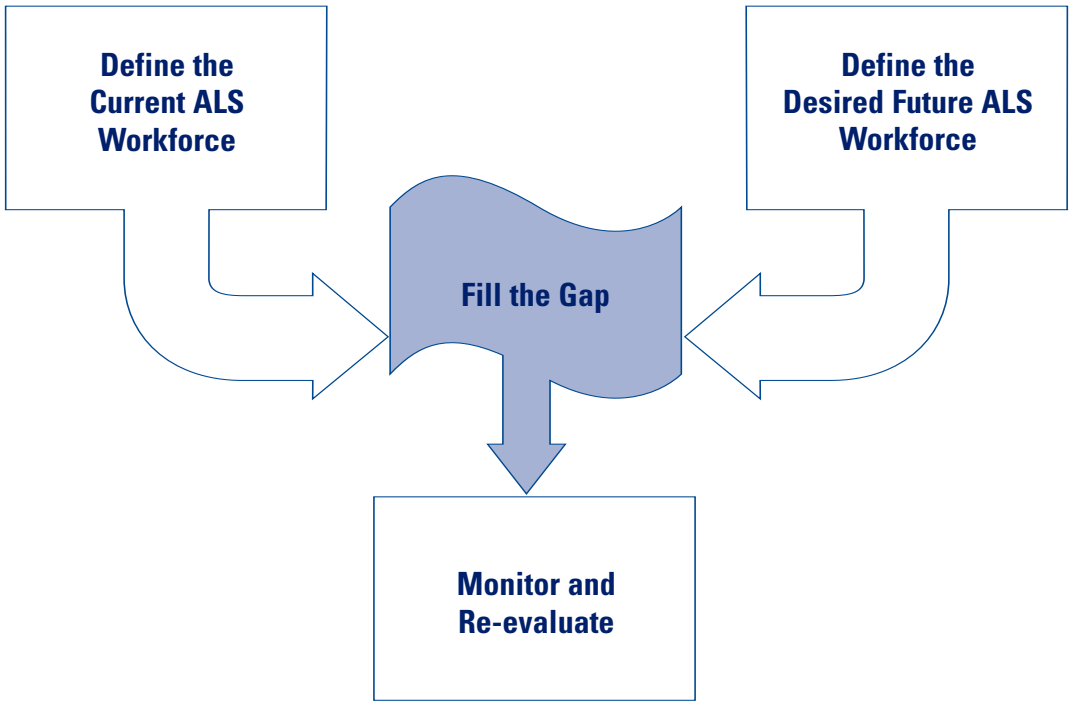
We have outlined a worksheet listing these categories in Appendix G. The worksheet is also available on the OEMS website at www.vdh.virginia.gov/oems. Click on the EMS Recruitment Directory/Workforce Retention Project link, locate the How to Retain ALS Providers Worksheets and download them. Take the time to complete this worksheet now.

Once you have completed the worksheet, you have defined the future ALS workforce and are ready to begin setting strategic initiatives for an ALS retention program in your agency.

Filling the Gap

Now we have defined where we are and where we want to go, how do we get there? As with each step in this process, we will employ a disciplined approach to selecting the specific strategic initiatives that will provide the greatest likelihood of achieving your ALS retention goals. The diagram below depicts where we are in the workforce utilization model.

Figure 6



Major Steps in Filling the Gap

Listed below are the steps we recommend to move from the current ALS workforce environment to the desired future state of your ALS workforce.

1. Developing specific strategic initiatives
2. Prioritizing your strategic initiatives
3. Implement your ALS Retention Program by using effective project and change management skills

Developing Specific Strategic Initiatives

Strategic initiatives come from many sources:

- Findings from the current work environment
- Tasks identified as a result of setting strategic goals
- Feedback from your ALS providers

Not only is it important to list all the possible action plans from our work to date, it is also critical to have a link between your strategic action plans and your ALS retention goals.

We realize this could be a lengthy process and recommend you use the Excel spreadsheet developed for this purpose in Appendix H as well as downloadable at www.vdh.virginia.gov/oems. Click on the EMS Recruitment Directory/Workforce Retention Project link to locate the How to Retain ALS Providers Worksheets.

As you will notice, we have created a format which allows you to group your initiatives and to link them to your retention goals. Now complete the strategic initiative template.

Prioritizing Your Strategic Initiatives

The initiatives that support the greatest number of goals will have the greatest impact on your key retention efforts. You now have a long list of initiatives that can become part of an ongoing ALS retention program. How do you determine which key initiative to work on first? You will need some mechanism to prioritize these action plans.

In reviewing the last worksheet, you may have noticed some of your initiatives supported more than one goal. Initiatives that support more than one ALS retention goal will have a more effective impact on your agency. Also, those initiatives that support the EMS retention principles will have a greater likelihood of success because those actions are founded on precepts and precepts do not change.

At the risk of being repetitious, we have created yet one more template to help you prioritize your strategic initiatives. Appendix I will help you tier the initiatives and identify the supporting retention principles of those action plans. This appendix is also downloadable at the website referenced above. Please complete Appendix I.

If after completing this template, you are interested in further prioritizing your initiatives, Appendix J contains a decision tree analysis to help you further prioritize your initiatives.

Once you have completed prioritizing your key ALS retention initiatives you will be ready to implement those plans and monitor their progress.

Implementing Your ALS Retention Program

Congratulations! You are now ready to implement your ALS retention program. When you begin to implement your overall retention program, you will want to use sound project management and change management practices. We recommend you consult with a quality project management resource guide to fully implement your ALS retention program. A couple of texts are included in the Suggested Reading section located at the back of this workbook.

Below are suggested steps to begin to implement your ALS retention program.

1. Identify the Project Sponsor- this may be you or the Senior Officer in your agency. The Project Sponsor should not be involved in the work of the project but does approve the project plans and adjustments to scope and other resources.
2. Identify an overall ALS Retention Program Manager. This person will oversee the project managers of each ALS retention initiative and ensure integrated planning when rolling out the overall ALS retention program. Integrated planning ensures maximum allocation of personnel and resources. Also integrated planning considers the timing and change management issues of each separate ALS project. Lastly, the ALS retention program manager should develop and execute a communications plan to build anticipation of the separate ALS retention initiatives in your agency. For example, a new ALS compensation package should be announced in an agency well in advance of the implementation. Communications also should celebrate successful projects which will in turn build excitement for other ALS retention initiatives.
3. Identify Project Managers and teams for each ALS retention project. Review the suggestions listed on page 10 of this workbook for criteria in selecting your implementation team(s).
4. Employ quality project management and change management skills from the beginning through the end of each project. Some of these skills are discussed below.

Roles of an Effective Project Manager

One of the most important responsibilities of an effective project manager is to work with the Project Sponsor to develop a scope statement for the project. The scope is an overview of the project that sets the boundaries for the work to include the goals, timing, resources and budget. "Scope creep" or the propensity of a project to veer from the initial boundaries is one of the first warning signs of a failing project. Therefore, the project sponsor and program manager should carefully monitor project updates to ensure a project remains within scope.

The project manager must also select and work with a project team. An effective project manager must employ good communication and team management skills. Holding project team members accountable for tasks is fundamental to the successful completion of a project.

Once the project scope and team(s) have been defined, the project manager and his team should develop a project plan. A project plan usually includes breaking the work down into manageable activities and tasks. Once the tasks are identified, the project manager assigns responsibility for the tasks to project team members. An effective project plan also will list timelines for completion of those tasks as well as budget constraints.

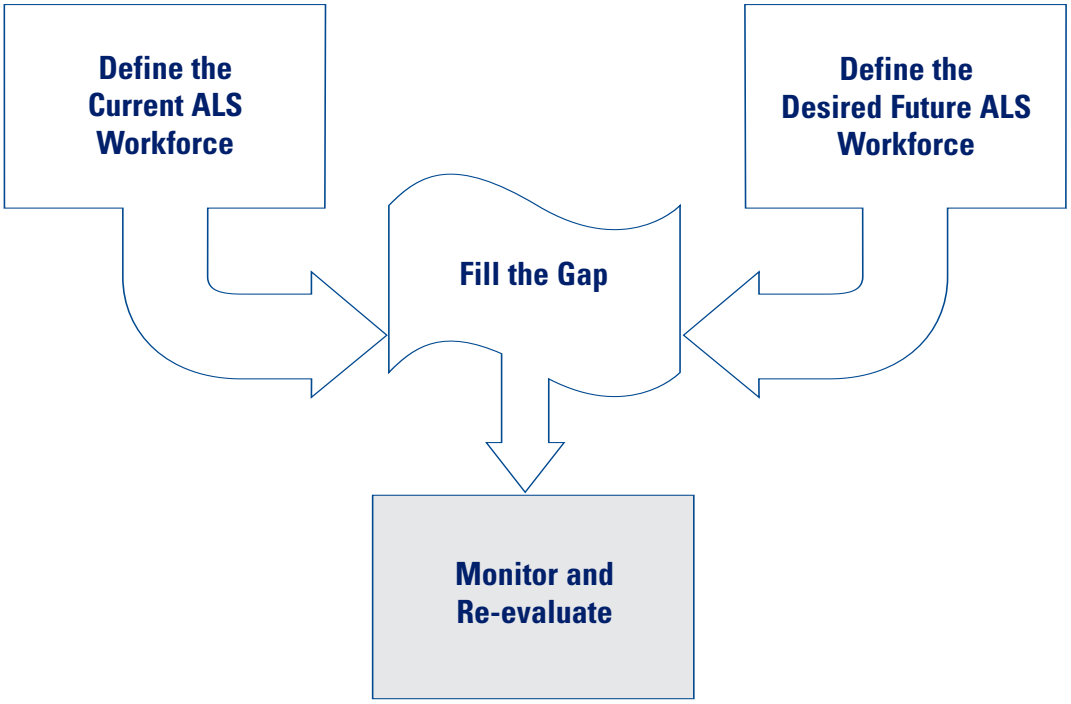
Lastly, a competent project manager must consider change management issues as he develops the project plan. After all, beginning a new project or initiative necessitates change within your agency. A great resource for understanding and managing change is contained in the third tool in the Keeping the Best! series, entitled "Maximizing Your Retention Efforts". This workbook is downloadable at www.vdh.virginia.gov/oems. Click on the EMS Recruitment Directory/Workforce Retention Project link, locate the workbook to download.

To assist you in creating a project plan for your separate ALS retention projects we have developed a project plan template that you may want to employ. The project plan template is located in Appendix K (this appendix is also downloadable at the website referenced previously). Complete the template or use another project management format to develop your project plans for your ALS retention program.

Monitoring and Re-Evaluating your ALS Retention Program

In this last chapter we want to remind you to emphasize the importance of continuing to monitor the effectiveness of your ALS retention programs. Please refer to the diagram to see we are now on the last step in the workforce utilization model.

Figure 7



As you complete an ALS retention project be sure to measure how effective you were in achieving the goals you desired from that project. Those goals should be clearly identified in your project scope. Further, conduct an after project review to identify and document ideas on how to improve the project in the future. We recommend you celebrate successful projects with communication throughout your agency. This could be at an agency town hall or a business meeting. Be sure in this communiqué to identify and thank your project managers and teams. Also as one ALS retention project ends continue the momentum in your agency by beginning a new ALS retention project. From the work you have done to this point in the workbook, you should have several retention initiatives listed by priority in Appendix I.

Annually or biannually monitor how successful you have been in achieving your overall retention objectives. Re-visit some of the questions we ask in Defining the Current ALS workforce section of this workbook and see if new factors are impacting the success of your retention programs. Every three to five years, it is important to go through this entire workforce utilization model again. As you have seen by completing this process once, some of your retention initiatives became self-evident.

If you continue to use the disciplined approach outlined in this workbook, we are confident that you will have success in *Keeping the Best!* ALS providers in your agency!

Bibliography

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8. EMS House of DeFrance http://www.defrance.org Keepin' Up in EMS, Four in Five Medics Injured on the Job, November 18, 2005

9. NFPA 1710, Standard for the Organization and Deployment of Fire and Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Career Fire Departments, 2004 edition.

10. NFPA 1720, Standard for the Organization and Deployment of Fire and Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments, 2004 edition.

Appendices

We highly recommend downloading these appendices (A-L) for ease in compiling the data needed to complete this workbook. Many of these worksheets have embedded mathematical formulas to aid you in compiling the data to complete this workbook. To download the appendices go to OEM website at www.vdh.virginia.gov/oems and click on the EMS Recruitment Directory/Workforce Retention Project link, locate the How to Retain ALS Providers Worksheets.

Population Comparisons with Surrounding Counties

State/County	Population (2004 Est.)	% of State	Population 2000	% change 00-04"	2010 projection	% change 00-'10	2020 projection	% change '00-'20
Virginia	7,457,827	100.0%	7,078,515	5.40%	7,892,900	11.51%	8,601,900	21.52%
Your County, City								
County A								
County B								
County C								
County D								

Population Breakdown

State/County	Population (2004 Est.)	< 5 years	< 18 years	20-34 year olds	35-44 year olds	5-64 year olds
Virginia	7,078,515	6.5%	24.6%	5.40%		
Your County, City						
County A						
County B						
County C						
County D						

Year 2025 Projections

State/County	(0-17 year olds	% increase '00-'25	18-24	% increase '00-'25	25-64 year olds	% increase '00-'25
Virginia	1,861,000	7.70%	771,000	6.34%	4,319,000	7.28%
Your County, City						

Note: If you cannot obtain specific population projections for your City , use the state's projections as a guide to anticipate in your city population projections.

Comparison Gender and Race Demographics with Surrounding State and Surrounding Counties

State/County	Female	White	African/ American	Latino/ Hispanic	Other cultural	Speaks other than English in home
Virginia	51.10%	72.30%	19.60%	4.70%	3.40%	11.10%
Your County, City						
County A						
County B						
County C						
County D						

**see Appendix C for this data*

Year 2025 Projections

State/County	Whites	% increase '00-'25	Black	% increase '00-'25	Latino/ Hispanics	% increase '00-'25
Virginia	5,951,000	9.05%	1,973,000	29.90%	538,000	67.08%
Your County, City						

Note: If you cannot obtain specific population projections for your City, use the state's projections as a guide to anticipate in your city population projections.

Name	Age	Gender	Race C, B, H, O, or Ot*	Service entry date	Date joined Agency	Certification	Enrolled in new Cert class	Membership/Leadership Position	% of shift running calls	County/City of Residence commute minutes	Reason for joining	Reason for staying	Date left	Reason for leaving	Family Status S,M, D, W	Education Status	Special Skills	Other Commitments
George Able	54	M	C	5/26/79	7/27/81	EMT-P	n/a	Active Member/ Chief	10%	Brown City 10	Serve Community	Family ties			M	BS	ALS Instructor	Chamber of Commerce
Henry Brown	46	M	C	6/27/82	5/20/86	EMT-P	n/a	n/a		Gray County 40-55	Serve Community	Likes action	1/15/02	Burn out	D	2yrs Coll	EMT Instructor	Served on Regional Council
John Campbell	26	M	C	3/25/02	3/25/02	EMT-B	Y	Active member/ Night Lt	90%	Gray County 30-45	Career Path	Likes fast pace	2/15/05	More pay	M			
Beth Franklin	19	F	C	2/1/03	2/1/03	EMT-I	N	Active Member	70%	Brown City 12	Career Path	Likes caring for sick		childcare issues	D	Assoc	Speaks Spanish	Has one child
Enrique Hernandez	27	M	H	3/7/98	5/5/02	EMT-I	N	Active Member	90%	Brown City 5	Career Path	Career Path			M	HS	Speaks Spanish	Cares for Elderly parent
Charles Johnson	32	M	B	5/16/03	5/16/03	EMT-P	n/a	currently in re-entry	0%	Brown City 10	Career Path	Likes action	10/31/05	do not know	S	Assoc	Search & Rescue	
Sam Jones	42	M	C	5/24/88	6/26/90	EMT-E	N	Active member	80%	Hill County 45	Serve Community	Family ties			M	BS		Newly married
Sue Jones	39	F	C	7/26/89	8/1/90	EMT-B	N	Active member	70%	Hill County 45	Family ties	Family ties			M	BA	Nurse	

** Race Key Caucasian, Black, Hispanic, Oriental, Other*

Name	Age	Gender	Race C, B, H, O, or O*	Service entry date	Date joined Agency	Certification	Enrolled in new Cert class	Membership/Leadership Position	% of shift running calls	County/City of Residence commute minutes	Reason for joining	Reason for staying	Date left	Reason for leaving	Family Status S,M, D, W	Education Status	Special Skills	Other Commitments

** Race Key Caucasian, Black, Hispanic, Oriental, Other*

Sample Turnover Rates

2003				2004				2005			
Certification	# as of Jan1, 2003	# left/ chged cert level	Annual turnover rate %	Certification	# as of Jan 1, 2004	# left/ chged cert level	Annual turnover rate %	Certification	# as of Jan 1, 2005	# left/ chged cert level	Annual turnover rate %
First Responder	2	1	50.00	First Responder	2	2	100.00	First Responder	3	1	33.33
EMT-B	43	5	11.63	EMT-B	45	3	6.67	EMT-B	47	6	12.77
Shock Trauma	4	1	25.00	Shock Trauma	5	2	40.00	Shock Trauma	4	0	0.00
Enhanced	5	1	20.00	Enhanced	6	2	33.33	Enhanced	7	1	14.29
Cardiac Tech	8	5	62.50	Cardiac Tech	7	2	28.57	Cardiac Tech	5	2	40.00
Intermediate	12	3	25.00	Intermediate	15	3	20.00	Intermediate	19	5	26.32
Paramedic	19	6	31.58	Paramedic	21	9	42.86	Paramedic	23	8	34.78
Total Providers	93	22	23.66	Total Providers	101	23	22.77	Total Providers	108	23	21.30
Total ALS	48	16	33.33	Total ALS	54	18	33.33	Total ALS	58	16	27.59

Your Agency Turnover Rates

2003				2004				2005			
Certification	# as of Jan1, 2003	# left/ chged cert level	Annual turnover rate %	Certification	# as of Jan 1, 2004	# left/ chged cert level	Annual turnover rate %	Certification	# as of Jan 1, 2005	# left/ chged cert level	Annual turnover rate %
First Responder				First Responder				First Responder			
EMT-B				EMT-B				EMT-B			
Shock Trauma				Shock Trauma				Shock Trauma			
Enhanced				Enhanced				Enhanced			
Cardiac Tech				Cardiac Tech				Cardiac Tech			
Intermediate				Intermediate				Intermediate			
Paramedic				Paramedic				Paramedic			
Total Providers				Total Providers				Total Providers			
Total ALS				Total ALS				Total ALS			

Turn-over rate = # left or changed certification level/ # as of first of year x 100

Call Distribution by Time of Day

2003	
Hour	**% of Calls**
0000-0059	
0100-0159	
0200-0259	
0300-0359	
0400-0459	
0500-0559	
0600-0659	
0700-0759	
0800-0859	
0900-0959	
1000-1059	
1100-1159	
1200-1259	
1300-1359	
1400-1459	
1500-1559	
1600-1659	
1700-1750	
1800-1859	
1900-1959	
2000-2059	
2100-2159	
2200-2259	
2300-2359	
	0

Sample Size of _____ Calls.

2004	
Hour	**% of Calls**
0000-0059	
0100-0159	
0200-0259	
0300-0359	
0400-0459	
0500-0559	
0600-0659	
0700-0759	
0800-0859	
0900-0959	
1000-1059	
1100-1159	
1200-1259	
1300-1359	
1400-1459	
1500-1559	
1600-1659	
1700-1750	
1800-1859	
1900-1959	
2000-2059	
2100-2159	
2200-2259	
2300-2359	
	0

Sample Size of _____ Calls.

2005	
Hour	**% of Calls**
0000-0059	
0100-0159	
0200-0259	
0300-0359	
0400-0459	
0500-0559	
0600-0659	
0700-0759	
0800-0859	
0900-0959	
1000-1059	
1100-1159	
1200-1259	
1300-1359	
1400-1459	
1500-1559	
1600-1659	
1700-1750	
1800-1859	
1900-1959	
2000-2059	
2100-2159	
2200-2259	
2300-2359	
	0

Sample Size of _____ Calls.

Call Distribution by Weekday and Month

2003	
Weekday	**% of Calls**
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

2004	
Weekday	**% of Calls**
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

2005	
Weekday	**% of Calls**
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

2003	
Month	**% of Calls**
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

Sample Size of ____ Calls.

2004	
Month	**% of Calls**
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

Sample Size of ____ Calls.

2005	
Month	**% of Calls**
January	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

Sample Size of ____ Calls.

Strategic Goals for ALS Workforce Retention

Category	Goal ID	Type of Measure	Goal	What to Track	Baseline	Target	System to Track/Measure
Membership							
	A	# ALS Providers	___ Agency will have XX active ALS members by_____ (Date)	# of ALS providers running calls	XX (from current environment analysis work)	___ ALS which is an increase of ___ ALS providers ___ will come from new recruits and ___ will come from existing EMT-Bs	Retention database
	B	ALS annual turn-over rate	___% – Less than ___% of the ALS providers will leave this year	Total membership will be tracked including date joined and date left	___%	Based on goals for new recruits – this means that approximately __ members or less will leave this year.	Retention database
Morale/Satisfaction							
	C	Average overall satisfaction	__ Agency will achieve an average overall satisfaction score on ALS morale of ___% by _____ (Date)	Morale of ALS providers via survey	Established after first survey	The target is ___% average score on the survey	Annual ALS provider survey
	D	Response rate on exit interviews	___% – of ALS providers will complete exit interviews by_____ (Date)	Survey/exit interview questions	___%	The goal is ___% completion for all members leaving the squad.	Survey/exit interview

Category	Goal ID	Type of Measure	Goal	What to Track	Baseline	Target	System to Track/Measure
Training							
	E	Total $ spent on training	___% of the total budget will be spent on training for ALS providers this year.	$ spent in budget on training related expenses		This is a___% increase over the current budget.	Budget
	F	Overall ALS satisfaction with training					
Effectiveness of Leadership							
	G	Overall ALS satisfaction with leadership					
Communication							
	H	Overall ALS satisfaction with communication					
Team Cohesiveness							
	I	ALS participation in agency - team activities					

Strategic ALS Retention Initiatives

ID	Categories	Initiative	Tied to Specific Goal ID
AA	**Demographic**	Research effective recruiting efforts for minorities.	A,B, D , F
BB	**Workforce Utilization**	Develop an automated and easy to use tracking systems for call volume information	
CC		Research additional deployment strategies for our ALS workforce	
DD	**Compensation and Benefits**	Develop an overall agency survey to track to include tracking ALS satisfaction with shifts, compensation and other factors.	
EE	**Training**		
FF	**Morale**		
GG	**Other**		

Grouping	Initiative ID	Initiative Description Goals	ALS Retention Goals Supported	EMS Principle Supported
Immediate	CC	*Research additional deployment strategies for our ALS workforce*	A, B,C	Life Cycle, Success, Belonging
Second				
Third				
Last				

Using Decision Tree to Determine Retention Program Priorities

Based upon the work you have completed up to this point, you should have several ALS retention programs to consider implementing in your agency. You know you can not work on all them at the same time. So how do you choose between all these programs? We suggest the use of a simple tool called a decision tree.

Decision trees are excellent tools for helping you to choose between several courses of action. They provide a highly effective structure within which you can lay out options and investigate the possible outcomes of choosing those options. They also help you to form a balanced picture of the risks and rewards associated with each possible course of action.

Drawing a Decision Tree

You start a decision tree with a decision that you need to make. Draw a small square to represent this decision towards the left hand side of a large piece of paper.

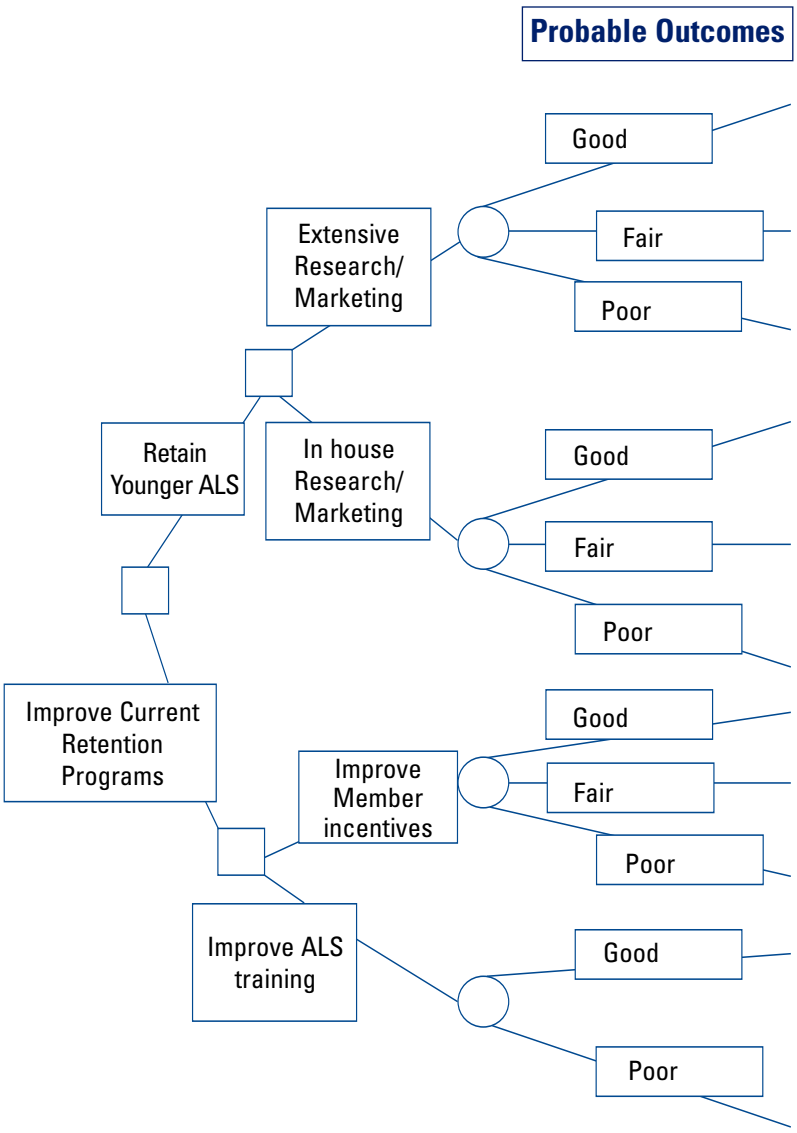
From this box draw out lines towards the right for each possible solution, and write that solution above the line. Keep the lines apart as far as possible so that you can expand your thoughts.

At the end of each line, consider the results. If the result of taking that decision is uncertain, draw a small circle. If the result is another decision that you need to make, draw another square. Squares represent decisions, and circles represent uncertain outcomes. Write the decision or factor above the square or circle. If you have completed the solution at the end of the line, just leave it blank.

Starting from the new decision squares on your diagram, draw out lines representing the options that you could select. From the circles, draw lines representing probable outcomes. Usually probable outcomes can be grouped as good, fair or poor outcomes. In some cases you may determine there is a probability of only good or poor outcomes. As you draw out the lines from the circles on your diagram, make a brief note above the line stating the probable outcome. Keep on doing this until you have drawn out as many of the possible outcomes and decisions as you can see leading on from the original decisions.

An example of the type of diagram you will create is shown in Figure 1.

Fig.1 - Example Decision Tree – Should we develop a new retention program aimed at younger ALS providers or improve our current retention programs?



Once you have drawn out your decision tree, review your diagram. Challenge each square and circle to see if there are any solutions or outcomes you have not considered. If there are, draw them in. If necessary, redraft your decision tree if parts of it are too congested or untidy. You should now have a good understanding of the range of possible outcomes of your decisions.

Evaluating Your Decision Tree

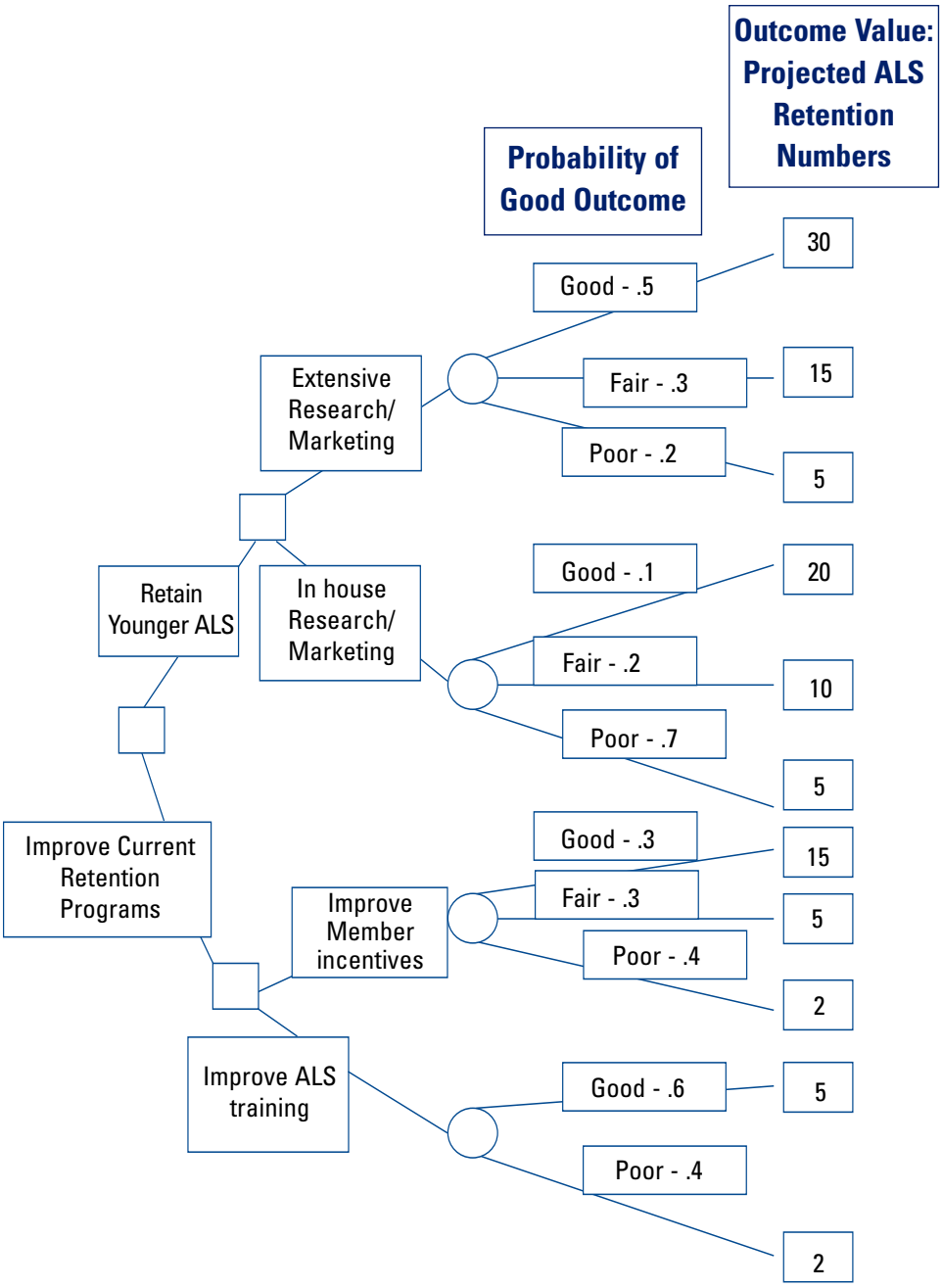
Now you are ready to evaluate the decision tree. This is where you can work out which option has the greatest worth to you. Start by assigning an outcome value to each possible outcome. This could be a dollar value or another measure such as number of new recruits or number of providers retained.

Once you determine your value measurement, estimate how much each outcome is worth to you if it was completed. In the example provided, the outcome value we chose to use is the number of ALS providers we estimate would be retained for each option.

Next, look at each circle (representing an uncertainty point) and estimate the probability of each outcome. If you use percentages, the total must come to 100% at each circle. If you use fractions, these must add up to 1. If you have data on past events, you may be able to make rigorous estimates of the probabilities. Otherwise write down your best guess.

These activities will give you a decision tree like the one shown in Figure 2.

Fig. 2 - Example Decision Tree – Should we develop a new retention program aimed at younger ALS providers or improve our current retention programs



Calculating Tree Values

Once you have worked out the value of the outcomes and have assessed the probability of the outcomes of uncertainty, it is time to start calculating the values that will help make your decision.

Start on the right hand side of the decision tree and work back towards the left. As you complete a set of calculations on a node (decision square or uncertainty circle), all you need to do is to record the result. You can ignore all the calculations that lead to that result from then on.

Calculating The Value of Uncertain Outcome Nodes

Where you are calculating the value of uncertain outcomes (circles on the diagram), do this by multiplying the value of the outcomes by their probability. The total for that node of the tree is the total of these values.

In the example in Figure 2, the value for "Retain younger ALS providers, Extensive research/marketing' is:

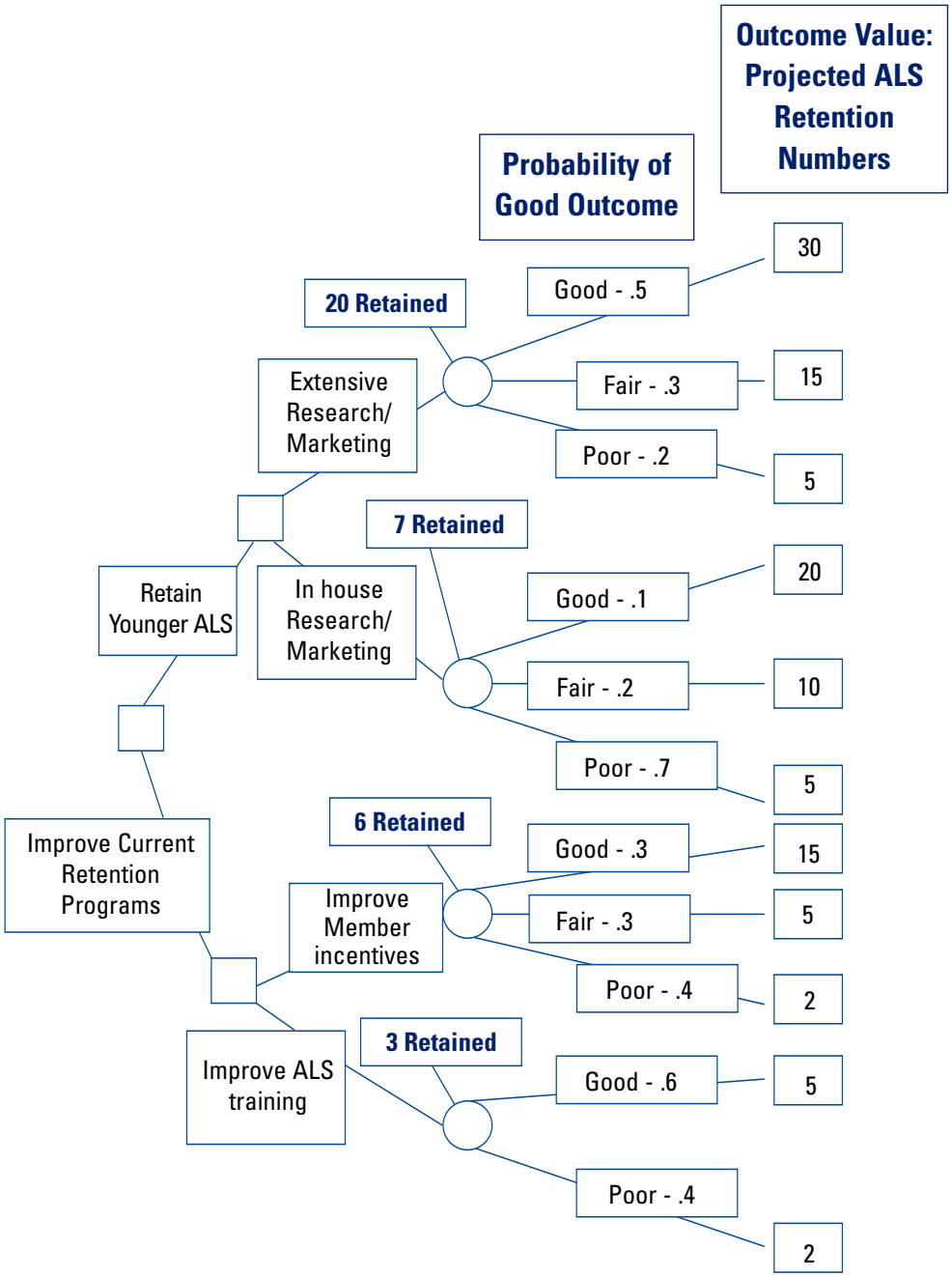
0.5 (probability good outcome) x 30 recruits (value) =	15 Recruits
0.3 (probability fair outcome) x 15 recruits (value) =	+4.5 Recruits*
0.2 (probability poor outcome) x 5 recruits (value) =	+1 Recruit
Outcome Value	**20.5 Recruits***
Whereas the value for "Improve current retention programs, Improve member incentives" is	
0.3 (probability good outcome) x 15 recruits (value) =	4.5 Recruits
0.3 (probability fair outcome) x 5 recruits (value) =	1.5 Recruits
0.4 (probability poor outcome) x 2 recruits (value) =	.8 Recruit
Outcome Value	**6.8 Recruits***

** We round down to determine number of retained ASL providers.*

Take a few minutes and determine the outcome values for the remaining branches on your own.

Figure 3 shows the calculation of uncertain outcome nodes.

Fig. 3 - Example Decision Tree – Should we develop a new retention program aimed at younger ALS providers or improve our current retention programs?



Note that the outcome values calculated for each node are shown in the boxes with blue letters.

Calculating the Value of Decision Nodes

When you are evaluating a decision node, write down the estimated cost of each option at the end of the decision line. Then divide the cost by the outcome value (estimated number of retained ALS providers) that you have already calculated. This will give you a value that represents the benefit of that decision.

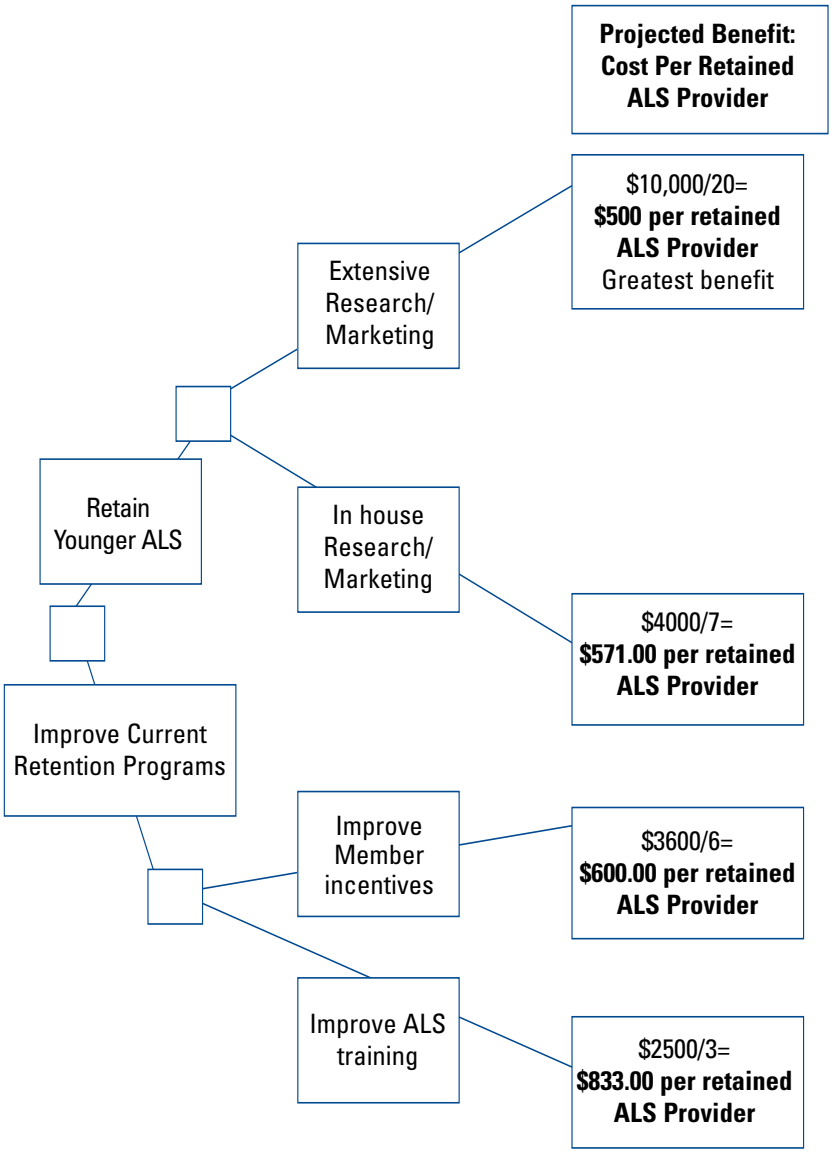
If you chose a dollar value to evaluate each option, you would subtract the estimated cost of the option from the dollar value that you have already calculated. This will give you a value that represents the benefit of that decision.

Keep in mind when determining the actual option costs, that amounts already spent do not count for this analysis - these are 'sunk costs' and (despite emotional counter-arguments) should not be factored into the decision. For example, if you had spent $10,000.00 in the past on developing your current retention programs these are “sunk costs’ and would not be added to the costs associated with improving those current programs.

When you have calculated these decision benefits, choose the option that has the greatest benefit, and take that as the decision made. This is the value of that decision node.

Figure 4 shows this calculation of decision nodes in our example.

Fig. 4 - Example Decision Tree – Should we develop a new retention program aimed at younger ALS providers or improve our current retention programs?



In this example, for the "Retain younger ALS providers, Extensive research and marketing" option, the outcome value was calculated to be the retention of 20 ALS providers. We estimate the future cost of this approach as $10,000.00. This gives a net cost for this option as $500.00 per retained ALS provider.

Whereas, the outcome value of "Retain younger ALS providers, in-house research and marketing" was 7 retained ALS providers. We estimate the future cost of this approach as $4000.00. This gives a net cost of $571.00 per retained ALS provider. On this branch of the decision tree, we therefore choose the greatest benefit option, "Retain younger ALS providers, Extensive research and marketing" and allocate this value to the decision node.

In the same way you can see that the other branch of the decision tree did not yield greater benefits or net costs than the "Retain younger ALS providers, Extensive research and marketing" branch. This is therefore the best program to pursue.

Result

By applying this technique we can answer the question:

Should we develop a new retention program aimed at younger ALS providers or improve our current retention programs?

The best decision when choosing between the two retention programs is to pursue the "Retain younger ALS providers" program.

In summary, decision trees provide an effective method of decision making because they:

- Clearly lay out the problem so that all options can be challenged
- Allow us to fully analyze the possible consequences of a decision
- Provide a framework to quantify the values of outcomes and the probabilities of achieving them
- Help us to make the best decisions on the basis of existing information and best guesses.

As with all decision making methods, decision tree analysis should be used in conjunction with common sense. Decision trees are just one important part of your decision making tool kit.

Now apply this tool to the decisions you need to make in choosing which retention programs you need to pursue in your agency.

Project Planning Template

Project Name: ______________________________

Project Scope: ______________________________ Project Measures: ______________________________

Team Leader: ______________________________

Activities	Tasks	Duration (hours)		Estimated Start Date		Estimated End Date		Responsibility	Expense		Comments
		Proj.	***Actual***	***Proj.***	***Actual***	***Proj.***	***Actual***		***Proj.***	***Actual***	
	Subtotal										
	Subtotal										
	Subtotal										
	TOTAL										

Summary of Actions for Improvement
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

(Continued on next page)

Summary of Actions for Improvement (continued)

11.

12.

13.

14.

15.

16.

17.

18.

19.

20.

Resources

Virginia Department of Health
Office of Emergency Medical Services
P.O. Box 2448
Richmond, Virginia 23218-2448
(804) 864-7600
1-800-523-6019 (VA ONLY)
www.vdh.virginia.gov/oems

Virginia Association of Governmental Emergency Medical Services Administrators
13101 Public Safety Drive
Nokesville, Virginia 20181
(703) 792-7482
www.vagemsa.org

Virginia Association of Volunteer Rescue Squads
P.O. Box 279
2535 Turkey Creek Road
Oilville, Virginia 23129
1-800-833-0602
www.vavrs.com

Virginia's Regional EMS Councils
Visit this Web site to list of all Regional EMS council offices
www.vaems.org

National Highway Traffic Safety Administration
Office of EMS
www.nhtsa.dot.gov/people/injury/ems/index.html

National EMS Management Association (NEMSMA)
www.nemsma.org

Renaissance Resources
Business Consultants
9100 Arboretum Parkway, Suite 270
Richmond, Virginia 23236
804-330-3088
www.rrconsult.com

Suggested Readings

The Fast Forward MBA in Project Management, Second Edition, Eric Verzuh, John Wiley & Sons, Inc., 2005

Project Management for Dummies, Stanley E. Portney, PMP, Hungry Minds, Inc., 2001

The Team Handbook, Peter R. Scholtes, Brian L. Joiner and Barbara J. Stribel, Oriel, Inc., Madison, WI, 2003.

A Thinker's Toolkit, Morgan D. Jones, Three Rivers Press, 1997.